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The Anne MacKenzie Oration.[1]

THE INTERACTION OF MIND AND BODY.

By HAROLD RITCHIE, M.B., Ch.M., F.R.A.C.P.,
Sydney.

IT is my privilege to deliver the Anne MacKenzie lay oration for 1940. This annual address keeps green, not only the memory of Anne MacKenzie herself, but also that of her eminent son, whose filial devotion chose this means of perpetuating her virtues. We hope and believe that he has erected a monument more lasting than bronze, so that when the pretentious memorials of wealth have crumbled unto dust Anne MacKenzie's name will still be commemorated in the capital city of the Commonwealth as an example of civic and maternal worth. By virtue of this foundation "her children shall rise up and call her blessed" throughout the generations.

I propose to address you on some aspects of the relationships between the mind and the body. Within the last thirty years our knowledge of these relationships has been greatly extended by the labours and discoveries of the Cambridge school of physiologists, who in some ways have helped to provide a physiological basis for the psychology of the Viennese school of which Freud and Jung have been the chief exponents. Freud, like Saul, who set out to look for his father's asses and found a kingdom, started out to explain the symptoms of hysteria and ultimately arrived at an all-embracing theory of human mental activity.

To this evening's task I address myself with due humility, as I confess myself to be neither a psychologist nor a psychiatrist, except in so far as many years of practice have borne in on me the essential unity of the psychical and the physical. In truth, "we are such stuff as dreams are made on".

[1] Delivered at Canberra on March 12, 1940.

I hope, then, to suggest to you that organic and structural disease of the body may arise from psychical causes; that structural disease in its turn, no matter how derived, always possesses some psychical and functional content; and that even when structural disease has healed, the after-effects of that disease upon the psyche may still persist.

When man first stood upon his own feet he was already endowed with two nervous systems, acting in concert and controlling bodily function. One, the more primitive, which from time to time has been given various names, exercises an independent control over the vital mechanisms of the body. Originally known as the sympathetic system, it has also been called the involuntary nervous system, but is now most commonly known as the autonomic nervous system. It is completely independent of the will and is linked up with the higher centres of the brain itself through the emotions alone.

In the slow process of evolution there was also evolved another and higher type of nervous mechanism: the brain and spinal cord. This strictly contrasts with the autonomic system, inasmuch as it is under the control of the will. It is known as the voluntary nervous system, and by the progressive growth of its higher faculties it has lifted man far above the brute creation and made possible our intricate civilization.

In man we find three levels of consciousness; the most lowly is seated in the autonomic system. Next comes the sensorimotor mechanism of the voluntary nervous system, which links us up with the outside world and in which psychical injuries may be translated as the so-called hysterical paralyses, contractures and disorders of sensation. Finally, there is the psychical level, at which distressing experiences may translate themselves as some form of psychical disorder, such as an obsession. Since the sensorimotor and psychical levels are more or less completely controlled by the will, they are generally, but not invariably, less vulnerable to emotional injury than the more primitive autonomic system. It is to some of the vagaries of the latter that I propose to confine my remarks tonight.

The autonomic system, amongst many other duties, controls the beating of the heart, the calibre of the blood vessels and the movements of the viscera, and in ordinary circumstances the regulation of breathing. By virtue of this involuntary mechanism the mind of man is relieved of the responsibility for constant superintendence of his vital functions. Just as man may not, by taking thought, add a cubit to his stature, so he cannot turn pale or blush at will, nor can he voluntarily dilate or contract the pupils of his eyes, accelerate or retard bowel movements, or produce that peculiar condition of the skin known as "goose flesh", though the various emotions readily do so.

As man laboriously climbed up his own family tree many of these primitive reactions to emotion became valueless to him, and of these the last example I gave, "goose flesh", is one. This reaction represents a reflex common in both rage and fear in hairy animals, and is most commonly depicted in the emotional responses of the domestic cat to the dog next door. But when man was a hairy animal himself he seemed in the sight of the enemy to swell in bulk and become more fearsome when, either in fear or in rage, his hair stood on end.

The various emotions, as distinct from the will, produce then a ready response from the autonomic nervous mechanism of man. A host of expressions, ranging from Holy Writ to the colloquialisms of everyday speech, will leap to the mind as examples of this: "his tongue clave to the roof of his mouth", "his bowels were turned to water", "he turned as white as a sheet", and countless other phrases convey the perception by the folk mind of the response of the autonomic system to emotion. In ordinary talk the effect of the emotions on the body is more commonly used to express the type of emotion than is the abstraction itself.

So we may compare this primitive nervous system with a harp vibrating through the whole gamut of the emotions. Its responses to emotions such as pain and rage are identical, since these emotions excite preparation for action. As Darwin wrote in his "Expression of Emotions in Man and Animals":

> Men through numberless generations have endeavoured to escape from their enemies or danger by headlong flight, and such great exertions will have caused the heart to beat rapidly, the breathing to be hurried, the chest to heave and the nostrils to be dilated. As these exertions have often been prolonged to the last extremity the final result will have been utter prostration, pallor, perspiration, trembling of all muscles or their complete relaxation, and now, whenever the emotion of fear is strongly felt, though it may not lead to any exertion, the same results tend to reappear through the force of inheritance and association.

Crile, in "The Origin and Nature of the Emotions", wrote as follows:

> . . . and now though sitting at his desk in command of the complicated machinery of civilisation, when (man) fears a business catastrophe, his fear is manifested in the terms of his ancestral physical battle in the struggle for existence. He cannot fear intellectually, he cannot fear dispassionately—he fears with all his organs and the same organs are stimulated and inhibited as if it were a physical battle with teeth and claws . . . Nature has the one means of response to fear and whatever its cause the phenomena are always the same, always physical. Under modern conditions of life neither fight nor flight is *de rigueur*, the individual under the stimulation of fear may be likened to an automobile with the clutch thrown out, but whose engine is racing at full speed—the petrol is being consumed, the machinery is being worn, but the machine as a whole does not move, though the powers of its engine may cause it to tremble.

It is in this manner that mental worries, through their emotional content, translate themselves into physical discomforts. The innumerable maladies which are disorders of function alone far outnumber those due to organic diseases, which may be defined as those diseases caused by alteration in the physical structure of the body. But the mimicry of organic disease is often remarkably close, and in the case of abdominal discomforts arising from psychical causes sometimes leads to an unnecessary operation, when anxiety over an unhappy marriage, an unfortunate love affair or a rapidly growing overdraft is the cause, rather than an inflamed appendix or gall-bladder. Similarly, when the worry is translated into forms of heart discomfort many a patient leads an unhappy existence, peregrinating between the bed, the bath-chair and the invalid sofa, when the actual conflict is not within the chest, but in the mind of the patient.

At this point it should be emphasized that this peculiar power of translation from the psychical is almost always unconscious—more so when the anxiety is deeply buried in the mind of the patient or banished by an effort of the will. It has been truly said that we really live more in the subconscious than in the conscious. This translation of cares and worries into physical discomfort or pain varies greatly in different individuals, though none is completely immune. The more civilized and intellectual types may be more prone to such disturbances than the clod.

Although the higher centres of man's brain cannot control the involuntary mechanisms of the autonomic system, yet they can, and do, control or mitigate the emotions which activate that mechanism. The highest organism is the most self-controlled.

The more vulnerable are indeed to be pitied. The warp and woof of their higher centres form an inferior texture. The strain of modern life proves too exacting and they "escape" from their responsibilities into an existence of chronic invalidism, which is rarely mute, however inglorious.

Nevertheless it is almost certain that some maladies which in their beginnings arise as functional disturbances of the nervous system eventually produce organic changes of a permanent nature, especially if they regularly tend to assume the same pattern. There are many, for instance, who believe that duodenal ulcer originates from a functional disturbance of the part of the autonomic system subserving the duodenum. There can be no shadow of doubt that a dormant duodenal ulcer can be wakened into life by worry and anxiety. Similarly, the origin of the symptom complex popularly known as "high blood pressure" almost certainly commences as a functional disturbance, causing constriction of the smaller blood vessels. If, as we are told, "care killed the cat", the mechanism of its death was mediated through the end effects of anxiety upon this primitive nervous system.

This leads us to a consideration of the penumbra of functional disorder which is always present in chronic organic disease. These are the cases in which the quack, the charlatan and the faith healer make their most impressive "cures". The victim of rheumatoid arthritis who discards his crutches and walks unaided after the Mumbo Jumbo of the faith healer, has discarded only the element of the functional in his malady which made the crutch and the stick necessary. Alas for poor human nature that such improvement, like religion taken piping hot at the penitents' seat, is rarely enduring!

Earlier I spoke of the innumerable facets of functional disease; and though there are some who from time to time exhibit many and various expressions of autonomic translation of psychical injury, as a rule, once the body has expressed psychical distress in one particular way, every subsequent worry will tend to follow the same nervous path and find the same physical expression. This tendency is known as facilitation. Just as one person will always tend to dyspeptic phenomena, another will suffer from recurrent attacks of palpitation, whilst a third will invariably find physical expression for his anxieties in pain and looseness of the bowels. When, instead of a single note of discord, we find whole symphonies of dissonance in the autonomic orchestra, life becomes almost unbearable for the victim, and more especially for his friends.

The occurrence of organic disease also rapidly produces facilitation. After recovery the presence of psychical strain will commonly cause the same pattern of pain as the original disease itself. For instance, there are ways and means of determining whether a gastric or duodenal ulcer is active or not with almost complete certainty; yet a patient who has recovered from a duodenal ulcer may later, under the influence of anxiety, tend to reproduce the picture of ulcer with graphic fidelity, even though the

original ulcer has healed. The expression of psychical distress in that particular part of the autonomic mechanism has been facilitated and a true recurrence of organic disease may eventually be produced.

Another and important by-effect of emotional provocation of the autonomic mechanism is the stimulation of the glands of internal secretion. Just as the ordered responses of the autonomic system were originally designed to protect the organism, so the secretion of the suprarenal glands was stimulated to mobilize and increase the amount of the blood sugar—to provide the animal with the additional glucose necessary for violent muscular exertion. It is quite clear that the autonomic nervous mechanism under psychical stress may in this way produce diabetes.

Crile, in support of this belief, quotes the saying: "When stocks go down in New York diabetes goes up." Since, in the words of Sherrington, "emotion moves us—hence the name", since, under the conditions of modern life, emotion is dissociated from movement, so constant stimulation of the suprarenal glands may in the first place, by constricting the blood vessels, elevate the blood pressure, and in the second place, raise the amount of sugar in the blood to a point at which it will pass the kidney threshold and appear in the urine. In similar circumstances the thyreoid secretion is increased to bring about an added "awareness" and a more rapid circulation of the blood. In this way mental and psychical stresses may be expressed via the autonomic stimulation of the thyreoid gland as exophthalmic goitre.

Life depends on constant adjustments of the organism to its environment. These adjustments enter into every sphere of our relationships to the external world, whether professional, business or social, and the ease with which they are accomplished is the measure of our well-being. If, on the other hand, an adjustment proves unduly difficult, it excites an emotional response which may be immediate or deferred. How many of us have seen sunshine after rain, smiles after tears, and heard the statement "I feel better now"? Here we have the immediate catharsis of a feminine emotion with the subsequent feeling of physical relief. If the emotion is "bottled up", however, it may reproduce itself later in the form of some more or less ill-defined symptoms of disordered bodily function. In a man the immediate response to an insult may be a blow; but if circumstances dictate that the insult should be "swallowed", a dyspepsia is not an uncommon result of the indigestible morsel, and the more difficult the swallowing process owing to the degree of emotion exacted, the more probable is its translation into a subsequent physical discomfort.

These problems of adaptation to environment are the background to half the ills that flesh is heir to. As I said previously, many of these emotional injuries have been consciously or subconsciously relegated into the abyss of forgetfulness, whence, nevertheless, they may project themselves, disguised as disturbances of autonomic function. It would seem that I am unfolding a sorry tale; but man has not yet risen to his full mental and spiritual stature. The proud genealogies of aristocracy date back only some few hundred years; our civilization itself is encompassed within a few thousands. These are periods which pale into insignificance compared with the æons of time during which primitive man lived by the body and for the body. In a few short years man has largely succeeded in converting his body into the temple of his mind. Should we wonder if we are not yet completely insulated against the torments of old instincts and vestigial reflexes?

The prevention or cure of the manifold disorders we have been considering comes from within as well as from without. Prevention demands an increasing knowledge of self, increasing self-control. The poet glimpsed the truth when he wrote:

> Self reverence, self knowledge, self control,
> These three alone lead life to sovereign power.

Cure depends upon a knowledge of the mode of production of the symptoms. When the psychical injury is buried in the subconscious it must be brought into the light of the conscious. This intellectual or spiritual catharsis, by establishing the nexus between the psychical stress and its physical manifestation, is often the only prerequisite for cure.

In times such as these, when the angel of death is abroad, when almost we can hear the beating of its wings, just as this buffeting of the psyche becomes more constant and intolerable, so its reflex manifestations will tend to become more frequent and insistent. Self-control becomes more and more necessary.

To regulate the response to emotion we must trust to reserves inherited and maintained through generations of stable and equable ancestors. Herein, national characteristics will tell in the future as they have in the past, for just as character is revealed in the instinctive response which occurs more quickly than conscious thought, so the powers of tenacity and endurance may be shadowed in the original emotional response.

GONORRHŒA IN THE MALE: ITS TREATMENT AND GENERAL HANDLING IN THE COMMUNITY.[1]

By WESTMORE F. STEPHENS,

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IN the time at my disposal it is impossible to consider all the clinical, bacteriological and pathological aspects of gonorrhœa, but I hope briefly to discuss the important considerations in regard to its prophylaxis, general management and treatment.

Prophylaxis.

In such a prevalent complaint as gonorrhœa, the first and most important angle from which we must approach our subject is that of prophylaxis and early preventive treatment. Various societies have sought to educate the general public in this matter and to place before them the grave risks involved by indulgence in promiscuous sexual intercourse. This education has, as you know, taken the form of lectures, illustrative films, notices displayed in public lavatories *et cetera*. All this work and expense in publicity have helped to bring before the notice of the public the fact that venereal disease is ever present in our midst.

I think that all will agree that promiscuous sexual intercourse is rampant in our midst and that, as cessation of promiscuity (which is the only sure prophylaxis for venereal infection) seems out of the question at present, provision must be made so that efficient preventive measures of treatment are conveniently available to those who run the risk of infection.

Preventive measures, to be of any real value, must be not only suitable in themselves, but must be administered by a skilled person fully trained in such duties. The only means of satisfying all these necessary conditions, as far as I see it, is to provide in each large city or centre some depot in charge of a permanent trained attendant, at which on application the patient having run the risk of infection may undergo all necessary preventive early treatment. Such places should, I think, be permanent, and their location should be widely advertised.

That proper prophylactic measures, taken early, are of benefit in most cases is borne out by the fact that my senior dresser at the Royal Melbourne Hospital assures me that in the last twenty years, of the thousands of patients applying for and obtaining prophylactic treatment at the hospital, less than 1% have reported again to the hospital as the result of failure to prevent infection.

The methods of prophylaxis adopted at the hospital clinic are as follows. The patient applying for treatment

[1] Read at a meeting of the Victorian Branch of the British Medical Association on July 3, 1940.

is first asked to pass urine. This act washes the urethra from behind forwards. The genitals and surrounding parts are then washed with a weak solution of potassium permanganate solution (say 1 in 6,000), particular attention being paid to the cleansing of the *glans penis*, the under-surface of the prepuce and the urinary meatus. The anterior portion of the urethra is then irrigated by means of a Janet syringe with potassium permanganate solution, 1 in 8,000, after which an anterior urethral injection is given; one to one and a half drachms of 5% argyrol or 0·75% collargol solution are used for this injection. (The dose is limited to one to one and a half drachms so that only the anterior part of the urethra is dealt with.) The patient is asked to hold this injection in the anterior part of the urethra for five minutes, and afterwards, by releasing the penis at the urinary meatus, to allow the surplus fluid of the injection to drain away. Calomel ointment (33%) is then applied to the genitals and the skin of the surrounding area, care being taken to see that the ointment is applied to the urinary meatus and the sulcus of the *glans penis* and to the under-surface of the prepuce. Final instructions given to the patient on the completion of the above treatment are: (i) Refrain from passing water for two or three hours. (ii) Report back at the hospital if any signs of trouble are noticed in the next few days.

To give some idea of the use people will make of preventive facilities, if these are available to them, let me say that no fewer than 800 persons have presented themselves for prophylactic treatment at the hospital in the first four months of this year.

The valuable results of this prophylactic treatment bear a definite relation to the time between the risk of infection and the application of preventive treatment. The sooner prophylaxis is applied after coitus, the better the chances of avoiding the disease. Six hours is the outside limit for the prevention of syphilitic infection by the application of 33% calomel ointment. The sooner treatment is applied, the better.

Treatment.

In the treatment and general handling of patients with gonorrhœa, it is imperative for us to appreciate the extent to which the disease has progressed in the patient presenting himself for treatment. Is he in the early acute, subacute or chronic stage of the trouble?

The history, along with the clinical signs noted on examination, helps us to make decisions which determine the most suitable means of treatment for the individual patient concerned. There is no such thing as a course of treatment for these patients, and each individual case must be dealt with on its own merits.

In treating a patient in the early stage of acute anterior urethritis, I think our main attitude should not be one of assault on the infective organisms with strong antiseptics, but rather to bring about such general conditions for the patient that he will be enabled to build up his resistance to the disease. Rest, both mental and physical, combined with the free intake of bland fluids and certain restrictions of diet in the early acute stage, is most helpful. Above all things, in the acute stage of infection, when subjecting the patient to local treatment, such as urethral lavage, see that no damage is caused to the engorged and friable mucous membrane of the urethra, either by strong chemicals or by the use of undue force in the operation. It should be our chief aim to confine the infection to the anterior part of the urethra if possible. Rough local treatment, in the form of irrigation badly administered, is the most frequent source not only of severe damage to the urethra, but of early extension of the infection to the posterior part of the urethra; this makes probable the occurrence of severe complications, such as involvement of the prostate, vesicles, vas and epididymis in the genital tract, or of the bladder or pelvis of the kidney in the urinary tract.

Local treatment, properly carried out, is still of the greatest benefit to the patient, in spite of recent rather prevalent ideas to the contrary. The only justification for omitting local treatment is the presence of circumstances which preclude the possibility of its being carried out in a safe and proper manner; frequently no local treatment is better than badly conducted local treatment.

The best method on the whole for lavage, either urethral or urethro-vesical, is, I feel certain, the gravity method with douche can, tubing and urethral Janet nozzle. The advantage of using this method of washing the urethra and bladder instead of hand irrigation with a large Janet syringe is that definite limits can be placed on the pressure used by regulation of the height of the douche can above the level of the bladder; approximately two and a half feet are sufficient for anterior irrigation and three and a half to four and a half feet for posterior or urethro-vesical irrigation. The method of lavage by the large Janet syringe and hand irrigation is suitable for use only by trained attendants or medical men constantly using this method and therefore more capable of gauging the necessary and, at the same time, safe pressure to apply.

As the disease progresses to the subacute and chronic stages, then various forms of more active local treatment frequently become necessary. This treatment includes the passage of instruments along the urinary tract, either for the purpose of diagnosis or for treatment. Instrumental dilatation of the urethra in treatment should always be controlled by regular urethroscopic examinations, and as a general working rule in gradual dilatation of the urethra by means of sounds or Kohlmann's dilator, the surgeon should not proceed to the next dilatation till all acute signs and symptoms due to previous instrumentation have subsided.

In the subacute and chronic phases of the disease irrigation in itself becomes less important; the number of irrigations should be reduced in frequency as soon as possible till irrigation is carried out only before or after instrumentation or prostatic or vesicular massage, or both before and after these procedures.

In the subacute, chronic and more obstinate cases vaccine therapy is often most helpful. I have not found that autogenous vaccines have any special advantages over the stock vaccines. At the Royal Melbourne Hospital and Government clinics we are in the habit of using the Commonwealth Serum Laboratories' mixed gonococcal vaccine, "D" strength, 500,000,000 gonococci per cubic centimetre. We start with an initial dose of 50,000,000 and increase the dose by 50,000,000 every four to five days, according to individual reaction. Protein shock therapy seems to have a valuable effect also in some troublesome cases. The protein given most often is "Aolan", a sterile milk preparation, given intramuscularly in doses of five to ten cubic centimetres.

It is impossible in a short talk like this to go into the detail of all the more severe complications of gonorrhœa and their treatment; but in passing I should like to mention those measures which seem to have proved most useful in treating the most severe of all complications of gonorrhœa, gonococcal arthritis. This complication occurs in about 3% of all cases of gonococcal infection. In the acute stage the joint should be partially immobilized; that is to say, if it is decided completely to fix the joint, then let complete fixation be only for short periods, the splints being frequently removed to allow of the local application of diathermy *et cetera*. Our patients at the hospital generally have partial immobilization with sandbags, the acutely inflamed joint being left exposed so that frequent dressings or applications, such as methyl-salicylate or hot foments, can be given. "M & B 693" is given in doses of 0·5 gramme, the total for the first seven days being three grammes per day. The total dosage may if necessary be reduced to two grammes per day for the next seven days. Later, when the acute stage subsides, vaccine therapy and injections of "Contramine" are given alternately at intervals of about two to three days. Scott's dressing is also frequently helpful to the joint, as also are diathermy and massage to wasted muscles in the region.

As the commonest cause of arthritic trouble is a chronically infected vesicle and less frequently an infected prostate, rectal massage of these organs should be commenced immediately the acute inflammation of the joint

has subsided sufficiently. I mention these points in the hope that they may be helpful in the treatment of this worst of complications.

Another complication of a severe and damaging nature which deserves special reference is stricture formation. The tendency to stricture formation is ever present and is characteristic of gonococcal infection. The stricture starts as a small round-celled infiltration of the sub-epithelial tissue of the urethra. This is found on urethroscopic examination as a hyperæmic, soft, friable area of tissue, annular, and involving the entire circumference of the urethra; or it may be flat and ribbon-shaped, extending along part of the axis of the urethra. The time for properly treating this prospective stricture is now, during this stage of "soft infiltration", and the method is gradual dilatation with metal sounds. More often than not with this treatment the temporary stricture resolves. If it is not detected and treated in this way the inflammatory process progresses to the stage of increased fibrosis, termed "hard infiltration", and appears as a white anæmic area on urethroscopic examination. This increased fibrosis increases the difficulty of and the time necessary for dilatation. Later, if the fibrotic process is not treated in the way described, it goes on encroaching on the lumen of the urethra to such an extent that urethrotomy eventually has to be resorted to.

The Sulphonamides.

Comparatively recently we have added the sulphonamides to our armamentarium for the treatment of gonorrhœa. The most widely known and useful of these seems to be the preparation known as "M & B 693". The drug, put up as it is in small half-gramme tablets, is convenient to take. It seems to be better tolerated in efficient doses than some of its predecessors.

From recent literature and reports from overseas by observers in the large venereal diseases clinics of the world, it seems generally agreed that with the advent of the sulphonamides in the treatment of gonorrhœa in all its forms we have made a considerable advance. So pronounced and quick is the change for the better, brought about by the disappearance of signs and distressing symptoms in early acute cases, that there is sometimes (and, I am sorry to say, all too frequently) a tendency to regard as actually free from infection patients who are in reality merely "symptomless carriers". These, as such, must of necessity be a great danger to the community at large, if, believing as they do, that they are cured, they proceed to live their normal sexual life and unduly to distribute their infection.

Since the introduction of the sulphonamides in the treatment of gonorrhœa it has been noted that there is a tendency among certain medical men, who up to now would not bother with a troublesome case of gonorrhœa, to undertake the treatment of these patients. There seems to be a widespread belief that all that is necessary is to prescribe "M & B 693" and to regard the patient as cured when the signs and symptoms disappear. At times no reasonable period of observation of the patient is undertaken, nor are any tests made to prove that the apparently cured are free from liability to convey infection. This state of things, if persisted in to any extent, can quite conceivably cause a serious increase in the spread of the disease, and may account for a number of these patients later found to be suffering from stricture formation. Of 37 patients known to have been treated solely with sulphonamides, no local treatment being given, 30 showed signs of stricture formation in varying degrees from soft infiltration to fibrous stricture.

However, in spite of any disadvantages in the use, or rather abuse, of sulphonamides, the advantages gained by their use are very great and are becoming more definite. The best dosage for safety and efficiency has not been in any way finally agreed upon, but a dosage of three grammes, divided into six half-gramme doses spread over the day, is safe and reasonably efficient.

In contrast with the earlier sulphonamide preparations, it has been found that delay in giving "M & B 693" for seven or eight days after the appearance of symptoms is not only unnecessary but unwise. Start giving "M & B 693" at once. Give larger doses in the first few days. Do not give small doses and increase them, rather the reverse. Do not be unduly fearful of toxic effects. They are on the whole mild, and frequently disappear as the drug continues to be administered; the worst of them certainly disappear in most cases when the drug is discontinued. The average dosage for an adult male is three grammes a day in six half-gramme doses, spread over the day for the first five days, and reduced to two grammes a day for the next five days. Patients in bed and under medical observation continuously can be given larger doses than ambulatory patients.

Since "M & B 693" has been used in treatment the number of cases in which complications occur (particularly severe posterior urethral complications) is greatly lessened; further, in cases in which complications are already present it is found that treatment with the sulphonamides brings these more rapidly under control.

As regards dosage, it has been found inadvisable to give small doses (say one gramme a day) over a long period. This method of dosage not only has not the same beneficial effect as larger doses, but often prevents the full benefits of larger doses given later on from being obtained. Also it has been found by observation of large series of patients that sulphonamide therapy is best combined with local treatment; and the fact that the patient has been given "M & B 693" does not absolve the practitioner from employing adequate local treatment at the same time, nor free him from his obligation to his patient, himself and the community, of subjecting his apparent "cure" to a long observation and a series of tests to prove as far as possible freedom from infection.

Standard of Cure.

While I am on this subject of "cure", what does the word mean as applied to a treated patient with gonorrhœa? I venture to suggest that at present the state described as "cure" conveys nothing definite. At the most it may signify that the patient does not, in the opinion of his medical attendant, require further treatment. There is room for grave doubt as regards cure in lots of these cases. There are many tests to which we can subject a patient in order to arrive at a reasonably safe opinion as to his actual condition. Till we have done all that is reasonably possible to prove freedom from infection, I do not think we are justified in applying the word "cured" to a patient who has had gonorrhœa. It is a great pity that some uniform standard of cure has not been arrived at. At present the word "cure" is used much more freely by medical men who have had least to do with handling the disease. The more one sees of gonorrhœa, the less one is inclined to use the word easily.

Here let me mention a few of the tests of cure that may be applied to a patient before he is declared no longer likely to convey infection. The patient is showing signs of possible freedom from his infection when, if after having been put off all treatment for gradually increasing periods up to six or eight weeks in all, he can satisfy the following requirements: (i) no urethral discharge is obtainable after his urine has been held overnight; (ii) his urine in the first and second glass tests is clear, containing possibly a few mucous threads which on microscopic examination prove to be free from pathological organisms; (iii) no local or general reaction occurs after an injection of provocative vaccine; (iv) the prostate and vesicles are normal when examined *per rectum*; (v) the material obtained at the urinary meatus by prostatic and vesicular massage *per rectum* is normal macroscopically and microscopically; (vi) the material so obtained yields no growth of pathological organisms on attempted culture; (vii) the gonococcal blood complement fixation test gives negative results; (viii) on urethroscopic examination both the anterior and the posterior portions of the urethra appear normal.

A word would not be out of place here on the significance of the blood complement fixation test in gonorrhœa. It is generally agreed that the result of the complement fixation test is of very little value in determining the actual state of the patient if vaccine has been administered at a shorter period than three months before the blood

for the test is taken. One very seldom gets a positive result to the blood complement fixation test in cases in which treatment with the sulphonamide group has been given. Further, a positive result to the complement fixation test is of more real value than a negative result. The result of a blood complement fixation test is usually more to be relied on in cases of posterior urethral and deep-seated infection than in anterior urethritis.

Medical Practitioners and the Health Department.

Before concluding this short and rather rambling talk on the subject I wish to take this opportunity of telling those medical men who treat these patients only, and also those who deal only with occasional cases of this kind, that the Department of Public Health of this State is desirous of a more thorough observation by the profession of the requirements of the *Venereal Diseases Act*. It is believed that for various reasons only a very small fraction of the patients with venereal diseases treated in private practice are regularly notified to the authorities, and further, that notice of transfer of a patient from one medical man to another is frequently not sent back to the previous medical attendant. This results in the same patients being reported by several practitioners, and renders the figures compiled by the department of little value in assessment of the true state of affairs in the community; it also causes a great amount of useless clerical work in the department.

The department prints a small book containing the necessary information about the *Venereal Diseases Act* as far as it concerns the medical practitioner, and will be pleased to send it to any who wish to be sure of carrying out their obligations in this matter. It is recognized fully by the department that improvement in the administration of the act cannot be attained without the whole-hearted cooperation of the medical profession.

Lastly, I wish to thank the Victorian Branch of the British Medical Association for affording me the opportunity of talking to you on this subject, and if anything I have brought to your notice should prove helpful in any way, I am more than repaid for any trouble and time expended in the preparation of this paper.

SYPHILIS.[1]

By KENNETH MCLEAN, M.C., M.D. (Melbourne),
Melbourne.

THE subject of syphilis is so vast that it seems best to try to give only a broad assessment of the methods of diagnosis, of the value of the different types of treatment and of the drugs used in such treatment, whilst tracing the trend of treatment to the point at which we stand today.

A review of the statistics of the Public Health Department of Victoria makes it difficult to consider that there is a serious decline in the incidence of syphilis in this State. The percentage of cases of syphilis among all cases of venereal disease reported has steadily diminished from 8% in 1935 to 4·3% in 1939; but the proportion of patients suffering from syphilis and reporting for treatment in the primary and secondary stages has increased steadily over these five years. Although some improvement in the education of the public is admitted, in a final analysis lessening of the incidence can arrive only by a shortening of the period of infectivity of the carrier. This shortening can be developed only by the establishment of early diagnosis and by the immediate institution of treatment sufficiently intensive to cause the rapid disappearance of the treponemata from the lesions. Fortunately we have at hand the means to reach both these objectives, and it remains only to use them.

Early Diagnosis.

Whilst the establishment of an early and definite diagnosis is essential for the reasons given, it will be realized that, in fairness to the patient, no course of treatment should be instituted without such certain diagnosis; the patient must not be placed in the position of being uncertain forever of his having in fact contracted syphilis because of his medical attendant's having preferred to act promptly "to be on the safe side". Urgency should wait on certainty.

Clinically there can be no certainty in the early stages of many lesions, and rigid adherence to text-book points of differential diagnosis must result in error. For example, it is reasonable to state that 40% of primary lesions are multiple, and from each of the multiple lesions the spirochæte can be recovered. Again, if undue stress is placed upon the presence or absence of induration, error will occur in the mucous type of specific lesion, and simple lesions which have been treated harshly with chemicals may mislead the diagnostician by their resulting induration.

Early recourse to the pathologist should be had, and to a competent and careful pathologist, for in many cases organisms will be discovered in a microscopic examination lasting thirty minutes which would have been missed in a briefer examination. It is obvious that a skilled man will obtain a higher percentage of positive results than one less familiar with the technique. I have seen a series of 27 consecutive "positive" reports when my own examination gave five "negative" results.

Of the types of microscopic examinations, the dark-ground illumination method is becoming more and more accepted as a standard, and the staining and collargol methods are being replaced by this. It appears that the dark-ground method has advantages in that it involves the examination of a greater volume of serum; moreover, the spirochæte is seen in its natural form, in its natural pallor, and with its characteristic slow movements and number of coils. Thus it can be identified positively against other types of spirochæte and the *Spirochæta calligyrum*, and in the case of mouth lesions against the local spirochætes of non-specific type.

"False negative" results will be obtained under two conditions: (i) when the primary lesion has been present for some weeks; (ii) when local antiseptic treatment instead of saline dressings has been applied in the forty-eight hours preceding the examination.

The following summary of diagnostic methods may be given:

1. Whilst a careful and competent examination will rarely fail to establish the diagnosis, one single examination eliciting negative results will not rule out syphilis; if the lesion is sufficiently suspicious the examination should be repeated.
2. Treatment should not be commenced without a positive diagnosis, and if this cannot be established by the microscope it seems wiser to await the day when the results of a serological examination will establish the diagnosis.
3. The puncture of inguinal glands would appear to hold a minor place in the diagnostic methods.
4. Experience shows that the true soft chancre is a very rare occurrence here, and it may be claimed that pathologists have demonstrated the Ducrey bacillus in this State on equally rare occasions.

Serological Tests.

The advent of the specific antibody to the blood stream provides the next line of diagnosis, and thenceforth an admirable control throughout the period of treatment. This antibody may make its appearance on the seventeenth day, or its appearance may be delayed for four or five weeks, so that the futility of examining for its presence prior to the seventeenth day is obvious. Yet this has been done, and the patient has been reassured wrongly.

Evaluation of the several methods of serological examination is the province of the serologist; but as each technician will have his own inclination and a method with which he is at home, the end results of which he has accustomed imself to assess, the clinician should be allowed some preference. The essential of any method is that it give reliable results from the clinical aspect.

[1] Read at a meeting of the Victorian Branch of the British Medical Association on July 3, 1940.

In spite of various claims, it appears that actually no one method will enable us to detect the antibody earlier than another, and this may be dismissed as a factor in the choice of method. My own preference is for the triple antigen method. The technique of this is more difficult, lengthy and troublesome than that of other methods; but the results are uniformly in accord with the clinical signs and the progress throughout treatment.

The Kahn method has the great advantage of easier application, so it is employed in many laboratories. In institutional work, and when quantitative reports are not desired, it is the most suitable method, and with more recent modifications it may be adapted to rural practice. When large numbers of tests are called for, this flocculation method, combined with that of the triple antigen method for doubtful readings, would seem to meet the requirements. This combination will probably be that used in military, general and special hospitals.

The Vernes test appears to present no particular advantage and has the distinct disadvantage of presenting to the patient too meticulous a quantitative curve. In some cases a result which was positive goes on to a negative result and then later returns to a positive, with disheartening effect on the introspective patient who has been following a curve which he considers he understands.

Prophylaxis.

If it is applied thoroughly within ten hours of exposure to infection, calomel ointment appears to be specific and adequate. When the patient is not seen until longer periods have elapsed, and there is a very reasonable chance that infection has taken place, one should assume that such infection is established and commence intravenous therapy forthwith.

English authorities recommend a total of 1·8 grammes of "Neoarsphenamine" in three doses on the first, second and fourth days. I have been accustomed to go further and to give six doses. Whether this is necessary it is difficult to say; but if the patient suffers no inconvenience it would appear to be a more certain prophylaxis.

Treatment.

Local treatment by antiseptics has no beneficial influence on the primary or secondary lesions, and simple saline dressings appear to meet all local requirements.

Arsenicals.

The ideal treatment would be the concept of Ehrlich and Hata—the immediate introduction of arsenic in one dose sufficiently massive to dispose of the invading organism forthwith. Unfortunately, the toxicity of arsenical preparations has proved the insuperable bar to this total warfare; but recent advances, which I shall discuss later, are taking treatment far along this road.

The early discovery that the arsenic of an ordinary intravenous dose of "Neosalvarsan" or a similar product required five to seven days for its elimination, established a time interval of treatment of seven days; this was convenient for hospital practice, and generally this weekly arsenical treatment has persisted. Over the last decade the major proportion of patients in all stages have been so treated. During this time has emerged the opinion that within reasonable bounds of dosage the onset of the various toxic manifestations of arsenic is determined more by the idiosyncrasy of the patient than by the actual amount of arsenic given. Indeed, the worst case of exfoliative dermatitis I have seen resulted from the introduction in two doses of 0·25 gramme of "Neosalvarsan" as rectal suppositories. If we subscribe to this belief, and in my own opinion it is correct, the natural step would be to increase the frequency if not the size of the dose, in the hope that a more massive and sudden attack could be made on the invading organism without an increase in the occurrence of toxæmia. Therefore Pollitzer and others in America evolved schemes of intensive treatment, some of which involved daily treatment over several days by dosage proportional to the body weight; but these failed because of the enormous increase in the incidence of complications. It has been my own practice in cases of primary and secondary syphilis to attempt to give 2·2 grammes of neoarsphenamine products in the first nine days—that is, on the first, third, sixth and ninth days—and to commence bismuth therapy at the third day. After these four doses the interval is extended to five or seven days in the ordinary way. I do not think that the incidence of toxæmia has been increased by the adoption of this method, and the shortening of the period of infectivity and the serological results would appear to justify it. It would not be too much to say that the prognosis in cases of syphilis in the primary and secondary stages depends largely on the treatment during the first three to four weeks, and it seems that intensification of arsenical treatment beyond the bounds commonly recognized is certainly desirable.

The Intravenous Drip Administration of Arsenicals.—The administration of arsenicals in increasing intensity and dosage was able to reach only a limit governed by the complicating toxæmias, and the most modern methods evolved to render the disease permanently non-communicable still required months of treatment. In 1933 Dr. Hyman and his associates in New York, who had been working on a new technique for introducing large amounts of fluids, drugs and biological substances by means of the intravenous drip, commenced to apply their method to the arsenicals. Their premise was that the untoward effect of the many drugs and arsenicals given intravenously was due not so much to the drug as to the error in technique of introducing rapidly a dose which, if given slowly by the drip method, would eliminate those complications due to what they called "speed shock". Should this, then, be true, and certain of the toxic manifestations of massive arsenotherapy prove to be due to speed shock rather than to the specific effect of the drug, they might successfully reach the goal of Ehrlich's *sterilisatio magna*. In 1933 this group treated 25 patients suffering from recently acquired syphilis. Briefly the technique was as follows. Under special nursing supervision a 5% dextrose solution was run in at the rate of 100 cubic centimetres per hour for a continuous period of ten to fifteen hours per day for four or five days. Each hour 0·1 gramme of neoarsphenamine in 50 cubic centimetres of 5% dextrose solution was introduced. In turn this was followed by an hour during which plain dextrose solution was given; thus in fifteen hours the patient would receive one gramme of neoarsphenamine. This would be continued for three, four or five days, an average of 4·1 grammes per patient. At first the complications were numerous and some serious. Primary or Herxheimer fever occurred in 60%, secondary fever in 65%, toxicodermas in 50%, and a most troublesome peripheral neuritis in 30%; but against this there were no late parenchymatous lesions, no liver damage and no serious exfoliative dermatitis in a series of 86 patients. The clinical results were excellent. Rapid healing of primary and secondary lesions was noted. Dark-ground examinations invariably gave negative results after twenty-four hours, and the patients were apparently rendered free from infectivity on their discharge from hospital. This group of patients was admirably followed up for from one to five years, and in 1939 Dr. Hyman and his associates formed these conclusions: (i) Their massive dose therapy in early syphilis yielded clinical and serological results equal to the best results obtainable by the best methods of routine continuous treatment, and that without the use of bismuth and mercury compounds. (ii) The great shortening of the infective period was a factor of prime importance in public health. (iii) Whilst admitting the increase in the percentage of toxæmias, they were not satisfied that this could not be reduced. Until this was accomplished, however, their methods should not be regarded as more than experimental and were not for routine use. Searching, then, for a less toxic arsenical, the group decided upon an arsenoxide type now stabilized as "Mapharsen", and with "Mapharsen" a further series of 250 patients with primary and secondary lesions have been treated. The incidence of toxæmias in this latest series is so small that they felt justified in April of this year in recommending the adoption of massive arseno-

therapy by the intravenous drip method for institutional work.

Let me quote from a personal letter of Dr. Hyman, April 24, 1940:

> The new technic [for massive dose chemotherapy] differs only in that you substitute daily 240 mgm. of Mapharsen for five days, totalling 1200 mgm., in place of the neo-arsphenamine. This will give you a negligible amount of primary fever, about 10 per cent secondary fever and virtually no peripheral neuritis.
>
> Please observe all the precautions we have noted. The treatment is not to be employed except in a well equipped institution with all the safe-guards and precautions we have stressed.

It is natural to expect that this war will present the opportunity of testing the worth of this method in a sphere where success would mean so much economically.

Arsenicals for Intramuscular Use.—There will always be a group of cases in which, if arsenic is to be given, it must be given other than intravenously. In a small percentage of adults the superficial veins are not adaptable to intravenous work, and in children the same may obtain. It would appear that the intramuscular route for arsenic should be avoided when possible; but when the intravenous route is not readily available, and in neurosyphilis, the pentavalent arsenic, although less powerful as a spirillicide, fills the gap. Most of the trivalent arsenicals used intramuscularly are not free from risk of causing intense pain and abscess formation, and one would be fortunate to carry a patient through a series of these injections without misfortune. A pentavalent arsenic, such as "Acetylarsan" or "Tryparsamide", is of low toxicity and free from these disabilities; but I have found it difficult to rate its therapeutic value highly.

The technique of using the deep subcutaneous route, by which the arsenical solution is laid in the potential space between the upper *fascia lata* and the muscle, has been extensively used for years at the Children's Hospital with minimal pain and abscess formation. The method was originally described by Dr. H. Boyd Graham in THE MEDICAL JOURNAL OF AUSTRALIA of March 11, 1922, and the patients have since been followed up as thoroughly as is possible in hospital practice. It is regrettable that this admirable method of intensive arsenical therapy is not more widely used in the very early months of life.

Arsenicals for Oral Administration.—The oral administration of arsenicals seems of little value, either as a prophylactic or as a therapeutic measure, and it would seem that the drugs of the "Stovarsol" and "Treparsol" type for oral use may be discarded.

Bismuth.

It is generally agreed that the administration of arsenic alone in routine treatment is justified rarely, if ever, for this reason: the chemical arsenic, which directly arrests the development of natural immune bodies, is eliminated comparatively rapidly, and in continuous routine treatment, therefore, there will arise periods when neither chemical nor immune body is present to give battle to the spirochæte.

Bismuth is much more slowly absorbed and excreted, both from the primary reservoir at the site of injection and from the more important secondary reservoir of the kidney, liver, muscle, blood and brain (in that order), in which tissues the storage of bismuth produces no pathological changes, even when doses capable of producing acute toxæmia are given.

Judged by the standard of urinary excretion, it would seem that the organic bismuth preparations are utilized better by the body than the original hydroxide and subsalicylate, and the swing is toward the use of the former, and justifiably. Any bismuth preparation, especially soluble preparations, should be given biweekly if bismuth tide is to be maintained, and the injection must be intramuscular and not into the superficial tissues, where the substance may remain unabsorbed for months.

What is apparently the biggest advance since the introduction of bismuth therapy in 1921 is the advent of the Stanford University product "Sobisminol". I have had sufficient of this preparation to treat only four patients, so that its disadvantages have been seen more readily than the advantages claimed for it could be tested.

The Stanford University workers, having demonstrated that bismuth compounds exist as electronegative complexes in the body, assumed that the greater and more stable the electronegative state of bismuth at the outset, the more uniform and dependable would be its antisyphilitic action. "Sobisminol", a complex organic compound, is stated to fulfil their requirements, and the clinical results over three years support their claim. These preparations, one for intramuscular and one for oral use, have been developed. The main interest lies in the "Sobisminol mass" for oral administration, as it gives some promise of being the first oral drug of real value as an intensive antisyphilitic. It has the obvious advantage of the oral drug, if efficient. Hanzlik and his associates have shown that the mass is efficient, if measurement of urinary excretion of bismuth be taken as a standard, since by administration of the mass alone there can be maintained a urinary excretion of bismuth equal to that obtained by the ordinary intramuscular injection of bismuth preparations. This naturally is increased if "Sobisminol solution" for intramuscular use is given concurrently. Here, then, we have a possible and even probable method of "shock treatment" with bismuth, just as we have with arsenic, in early syphilis when the patient is sensitive to arsenic.

My own supply has been sufficient to try on four patients only, so that critical comments are worthless. It is obvious, however, that the solution for intramuscular use causes more pain than other products, and in the case of the mass three of the four patients discontinued its use on account of gastro-intestinal disturbance. In the one case in which the combination was used as a shock treatment to replace arsenic, "Sobisminol" was well tolerated and the result seemed satisfactory.

Mercury.

It will be conceded that the value of mercury is small as compared with the other heavy metals, and that it can be used only as an adjuvant, either given by the mouth or applied as an inunction, the latter having its greatest value in early congenital syphilis. In my experience the several preparations for intramuscular use cause pain and distress to the patient sufficient to outweigh the small therapeutic advantage.

Heat Treatment.

The value of heat and fever treatments in neurosyphilis has been well known for years; the large proportion of neurologists prefer fever treatment by means of benign malaria. Extension of heat treatment to Wassermann-fast cases has produced valuable results, particularly since the more general adoption of the simple methods. From this the step to the use of heat in early syphilis is a natural one, and it is certain that the adoption of simple heat methods will be a real help in all stages of syphilis. Unfortunately lack of time prevents my dealing in detail with this branch of therapy.

Summary and Conclusions.

To sum up, it appears that the essentials for the successful prosecution of antisyphilitic treatment are the following:

1. The establishment of early and accurate diagnosis.

2. The immediate institution of treatment more intensive than the ordinary routine continuous treatment, which should cease to be regarded as satisfactory. There could be four methods of intensive or shock treatment: (*a*) simple acceleration of routine treatment with arsenic and bismuth in the first three to four weeks; (*b*) the adoption of the Hyman intravenous drip method, alone or followed by further routine treatment; (*c*) the combination of (*a*) with shock treatment by means of "Sobisminol" products; (*d*) the use of fever or heat treatment along with chemical therapy at the outset.

In private practice the method (*c*), that is, the combination of shock arsenical treatment with shock bismuth treatment, seems to be that which would be most feasible and likely to gain favour. Many patients will be reluctant

to place themselves in hospital for institutional treatment, and this method seems a fair compromise in these cases.

3. The continuation of treatment for a period which may appear to the patient to imply over-treatment, and which may be so, but which will be safer.

My own feeling is that further advance in antisyphilitic treatment may well be in the development of some non-metallic drug of the sulphanilamide type. Such a drug, of the amido group, is now being adequately tested against the trypanosome of sleeping sickness. Two thousand patients with trypanosomiasis have been treated with apparent success by daily injections of this non-toxic preparation, and what is effective against the trypanosome may well be effective against the spirochæte.

Reports of Cases.

AN UNUSUAL ARRANGEMENT OF THE LONG SAPHENOUS VEIN.

By C. H. WICKHAM LAWES, M.B., Ch.M., F.R.C.S.,
Sydney.

IT is well known that veins of the lower limb, while following a general plan, are subject to considerable variation. It is the object of this note to report an arrangement which is very uncommon. Not only is it unusual, but the fact that it was different on the two sides is worthy of note.

Clinical Record.

Mrs. C., aged forty-five years, had suffered from varicose veins of both legs for many years. She had been treated by injections on two occasions, with no relief on one occasion and only temporary relief on the other.

On examination varicose veins were present in both lower limbs. The Trendelenburg sign was elicited, and the valves of communicating veins were defective. Saphenous ligature and retrograde injection were advised.

Operation was carried out under local anæsthetic. On the right side the long saphenous vein at the *fossa ovalis* was very large, and a large *saphena varix* was present. The vein ran downwards and inwards in the normal way and

FIGURE I.

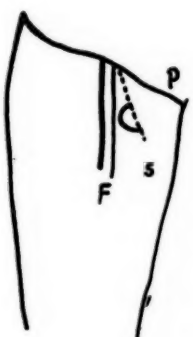

FIGURE II.
F: femoral artery; *P*: Poupart's ligament; *S*: saphenous opening with incision shown as dotted line.

the superficial femoral branches were not seen. On the left side the arrangement was quite different. The vein was very large at the *fossa ovalis*, and it at once divided into three equal sized branches. The first was the superficial external pudendal vein, which was large and varicose and ran normally in a medial direction. The long saphenous vein then divided into two portions which ran downwards and medially in the normal direction and parallel to one another. It was impossible to decide which was the main trunk and which a branch, and so further dissection was necessary. The incision was enlarged down the thigh and the two veins were traced for a distance of one and a half inches, when it was found that they rejoined to form a venous loop (see Figure I).

Ligation of all veins was carried out and retrograde injection was made into the main vein below the junction.

Comment.

The usual arrangement is for the medial and lateral femoral cutaneous veins to join the long saphenous vein about five centimetres below the *fossa ovalis*, and for the three superficial veins to join its extreme upper end. All manner of variation is met with; common types are (*a*) that in which the superficial branches unite before joining the main vein, and (*b*) that in which the cutaneous branches enter it high up near the *fossa ovalis*. In the latter case the medial branch running downwards and medially may easily be mistaken for the long saphenous vein.

In the case reported the division of the long saphenous vein into two parallel branches was very unusual and suggested a high medial femoral cutaneous vein; only an extensive dissection showed the true state of affairs.

Three lessons may be learned from this case:

1. A thorough dissection of the region of the upper end of the long saphenous vein is necessary for the purpose of accurate identification of the veins. The operation is, of course, wasted if the long saphenous vein is not tied and retrograde injection is not given into the distal end of this vein.

2. An oblique incision is the best for finding the vein and its branches. It should commence at the outer side of the upper end of the femoral artery and run obliquely downwards and inwards at an angle of about 25° (Figure II).

3. The operation should not be regarded as a simple minor operation, and it must be carried out in an operating theatre with full surgical asepsis and a good assistant.

Reviews.

"SHELL SHOCK."

IN "Shell Shock in France" Dr. C. S. Myers has given us his experiences as a psychotherapist during 1914-1918.[1] On the outbreak of war he left his psychological laboratory in Cambridge to join a hospital unit, privately raised and staffed largely by graduates from his old medical school. However, he did not feel at home in returning to clinical work, and early in 1915 his services were requisitioned by the consulting neurologists to the British Expeditionary Force and in due course he was appointed consulting psychologist.

In this book, which is based on a diary, Dr. Myers tells us how he attempted to deal with the expanding problem of neurosis in the military forces. No doubt the director of a psychological laboratory, accustomed to relatively controlled conditions, found it hard to work in the uncertain atmosphere of warfare. It was still more difficult to incline readily to the conservatism of the authorities. After a struggle to obtain recognition for conditions which were neither insanities nor organic nervous diseases, it was not until the end of 1916 that special centres were established in the rear of army areas, and even then there had to be met a shortage of medical officers with special experience. Having achieved these and other objects, Dr. Myers returned to England, where he played a part in the training of medical personnel in the treatment of psychoneuroses.

While the greater part of this book is devoted to administrative details, the purely clinical aspects of "shell shock" have not been overlooked. Dr. Myers has emphasized the importance of close medical supervision of the psychoneurotic from the acute stage through the convalescent phases of graduated activity right up to return to full duty. The opinions expressed in the following quotation will no doubt be generally approved.

> A trained neurologist is by no means necessarily the most successful physician for these cases. Valuable as is such previous training for the elimination of the rare organic cases which are erroneously diagnosed as "shell shock", and still more valuable as is an adequate previous training in psycho-pathology and psycho-

[1] "Shell Shock in France 1914-1918, Based on a War Diary", by C. S. Myers, C.B.E., F.R.S.; 1940. Cambridge: The University Press; Melbourne: G. Jaboor. Crown 8vo, pp. 152. Price: 4s. 6d. net.

therapy, what is even more important is that the Medical Officer should possess enthusiasm, confidence, cheerfulness and tact, with wide knowledge of the failings of his fellows and an ability promptly to determine whether a policy of persuasion, analysis, intimacy, sternness or reprimand should be adopted. Only the experience of such a man can lead to the successful treatment of individual patients, the detection of the (partial or pure) malingerer and the avoidance of injustice to genuine cases; and even he will occasionally fail. The number of cases under the charge of a single Medical Officer should not exceed seventy-five.

Nursing Sisters are of the greatest value, their personality, like that of the Medical Officers, being of paramount importance.

With the adoption of these measures and of systematic treatment every advantage will be found to attend the segregation of "shell shock" cases. If, however, they are herded together and left to themselves, they are almost sure to go from bad to worse.

One wonders what contributions would have been made if this distinguished scientist, who later became Director of the National Institute of Industrial Psychology, had applied his experience to problems of a less clinical order. One must presume that mass testing of intelligence and vocational selection did not appeal to him as worthwhile activities in comparison with the ascertainment, treatment and disposal of the "nerve" casualties of war.

The book can strongly be recommended not only to junior but even more to senior members of army medical services.

PATHOLOGICAL HISTOLOGY.

A SECOND edition of "Elementary Pathological Histology", by W. G. Barnard, professor of pathology, University of London, Saint Thomas's Hospital Medical School, has been published this year.[1]

In his preface the author makes a feature of the fact that disease is a progressive process and that a true representation of morbid histology would be by cinematograph films. He indicates that the object of the study of morbid histology is not to make a spot diagnosis of what has occurred, but rather to enable the student to visualize what the body does to correct or evade the consequences of damage. In keeping with this idea, the book is divided into sections, twenty-two of which deal with the various phases and types of inflammation, repair, degeneration, atrophy *et cetera*, and eight with newgrowths.

Each section begins with a short, clear and concise description of the reactions of the tissues, and the accompanying pictures serve to illustrate the characteristic changes. The work consists mainly of illustrations, mostly black and white reproductions of photomicrographs. There are occasional diagrams and a few coloured pictures to show the stained appearances of microscopic sections. These illustrations are excellent and the legends adequate. Where necessary, certain areas are shown as high-power views to give in greater detail the distinctive alterations described. One criticism is that the letters in the figures depicting pericarditis are not so easily picked out as we should like.

The book will be valuable to medical students, for whom it is chiefly intended.

SURFACE ANATOMY AND X-RAY THERAPY.

"A TOPOGRAPHICAL Atlas for X-Ray Therapy", by Ira I. Kaplan and Sidney Rubenfeld, is really only a limited manual of surface anatomy flavoured with a slight tincture of X-ray therapy.[2] The X-ray directions comprise mainly the placing of hypothetical squares, representing treatment fields, upon conventional anatomical diagrams. The fundamental idea behind this production is to increase the accuracy of therapeutic technicians by instructing them in the art of setting up treatment fields in accordance with the anatomy of the part concerned.

In the first place, it is doubtful whether such treatments can be adequately given by routine methods, for scrupulous accuracy in placement by standards adapted to the individual patient is essential for success, more especially if the fields used are small, as they frequently are. Secondly, it is more than doubtful whether any lay technician should be left to lay out the field of administration unaided. At the least the fields should be primarily outlined on the patient by the radiotherapist himself for the technician's subsequent guidance. The inspiration of the book therefore seems faulty and based on unsound principles; but, still worse, the anatomical diagrams, notably of the liver, spleen, stomach, colon and kidney, fix these organs only in conventional positions, from which, as every radiologist knows, there is a wide variation according to the build of the patient. The diagrams represent the hypersthenic type, and this is the type of human being least frequently seen.

Pathological lesions in the area of interest may completely change the normal relations, and for this reason alone we are commonly compelled to consider the anatomical elements of each lesion as a separate and individual problem in which conventional relations are worse than useless. To present the trusting technician with such explicit information as is enclosed in this book without indicating its limitations is a dangerous and false simplification of the problem.

The book therefore cannot be recommended for technicians whilst its contents are too thin, disconnected and trifling for the qualified radiotherapist. The production is lavish and the quality of the illustrations is excellent.

A SHORT HISTORY OF BACTERIOLOGY.

"BACTERIOLOGY", by W. W. Ford, emeritus professor of bacteriology, Johns Hopkins Hospital, is an informative and entertaining handbook belonging to the series which, under the title of Clio Medica, "aims at presenting in a concise and readable form a number of special phases of the long and complex history that underlies the great edifice of modern medical science".[1] The author has adopted the method of discussing the growth of bacteriology chronologically. He commences with a chapter on "early observations", in which he mentions the writings of Anaximander of Miletus (610 B.C.) and Aristotle (384 B.C.) on the subject of spontaneous generation, which was revived by Redi (1626-1697). He proceeds to the subject of magnification, beginning with the invention of a crude microscope by a Jesuit priest, Kircher, in 1671 and enlarging on the discovery of bacteria by the microscopist Anton Van Leeuwenhoeck.

The "18th Century" and "19th Century" chapters lead to detailed articles on Pasteur, Tyndall and Lister. Then follow "The Rise of the German School", "Koch", "Pasteur's Work on Vaccination", "Toxins and Antitoxins", "Immunology" and "Later Developments". The author's story is well told, in good English, and replete with scientific and historical facts. There are an "Index of Perusal Names", an "Index of Subjects" and an interesting 32-page bibliography. The format and printing leave nothing to be desired.

A BOOK OF OBSTETRICS FOR NURSES.

JELLETT'S "Midwifery for Nurses" has now reached its eleventh edition.[2] The chapter dealing with antenatal supervision is adequate and includes recognition of the value of antenatal exercises. The detailed account of the preparations for delivery according to New Zealand standards is a valuable portion of the book. There is still a tendency to advocate vaginal douching to a greater extent than most teachers now recommend, and the same criticism applies to packing in cases of accidental hæmorrhage. While early rising in the puerperium is still advocated, simple exercises are also illustrated.

The stated dose of quinine (fifteen grains) is far too large for use in the medicinal induction of labour, and it is surprising that this has not been corrected in this edition. The section on puerperal infections is not up to date. Vaccines and serum are now largely discarded, and no mention is made of modern advances in bacteriological knowledge, especially as applied to the classification of the various types of disease. The chapter on infant feeding follows the system in use in New Zealand. Nurses will find this valuable, provided they check this section with the teachings of their own schools. Despite these criticisms of details, this text-book still maintains its reputation as the leading treatise for nurses in the English language.

[1] "Elementary Pathological Histology", by W. G. Barnard, F.R.C.P.; Second Edition; 1940. London: H. K. Lewis and Company Limited. Crown 4to, pp. 80, with 181 illustrations. Price: 10s. net.

[2] "A Topographic Atlas for X-Ray Therapy", by I. I. Kaplan, B.S., M.D., and S. Rubenfeld, B.S., M.D.; 1939. Chicago: The Year Book Publishers Incorporated; Melbourne: W. Ramsay Proprietary Limited. Demy 4to, with 55 plates. Price: $4.00 net.

[1] "Clio Medica: A Series of Primers on the History of Medicine", edited by E. B. Krumbhaar, M.D.; XXII: Bacteriology, by W. W. Ford, M.D., D.P.H.; 1939. New York: Paul B. Hoeber. Foolscap 8vo, pp. 222. Price: $2.50 net.

[2] "A Short Practice of Midwifery for Nurses", by H. Jellett, B.A., M.D., F.R.C.P.I.; Eleventh Edition; 1940. London: J. and A. Churchill Limited. Crown 8vo, pp. 528, with illustrations. Price: 15s. net.

The Medical Journal of Australia

SATURDAY, SEPTEMBER 21, 1940.

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THE WAR AND AFTERWARDS.

APART from what he does in a reflex way, man's actions may be the result of compulsion or of choice. What a man is compelled to do may, of course, be what he would choose for himself, and in these circumstances, though the end result may or may not be good, those immediately concerned will no doubt be satisfied. If the act dictated by force is opposed to the inclinations, the wishes or the convictions of the individual, the effect on him may be profound. Without an enlistment of his reason resentment will arise, to be followed in persons of ordinary mentality by feelings of hatred and plans for retaliation. It is probably true that most men will obey an intellect in which they recognize qualities or virtues higher than their own. Occasionally, therefore, blind obedience exacted by force may be followed in turn by acquiescence, cooperation and a fundamental change in inclinations, wishes or convictions. When a man's actions are of his own choosing, his motives may be selfish; on the other hand, they may be entirely unrelated to himself; and in either case they may or may not be laudable. Acts apparently undertaken from choice may be the result of laziness—men sometimes take a course of action because it seems the obvious thing to do; it lies near at hand; other people are doing it; and they take no thought of right or wrong or of the future implications of what they do. In these circumstances, though laziness may be held responsible, the act is none the less an act of choice. If all these statements are true of individuals, they are true also of people acting together, of communities, of nations and of races; and we find much food for thought if we apply them to the life and death struggle in which the British Commonwealth of Nations is engaged. The discovery of motives is always difficult, and the present discussion will be simpler if it is confined as far as possible to the British peoples. It may be objected at the outset that motives do not matter provided the units of the British nation and the people composing them are determined to secure victory and direct all their energies with single-minded determination towards that end. But the winning of the war is not the final objective. Even if it were, motives would still be important, for no one will deny that action is likely to be more united and therefore more effective as it is freed from thoughts of personal gain and aggrandisement. Never must it be forgotten that when the war is over the world will be in a state of economic and social confusion; and it is not idle to expect that the structure of society, as we have known it, will be so shaken at its foundations that a new social order will have to be built among the ruins of the old. We must therefore have as our aim not only the winning of the war, but also the reconstruction of the social order of the world. Be it noted that the task is not the rebuilding and settlement of Europe and its problems—that were formidable enough; it must involve all the peoples of the earth. There are those in influential quarters who would have the British race leave Europe to its own devices that the British people might live, self-sufficient, behind a safety wall of their own erection. But the British peoples have assumed the role of leadership, and even if they had not done so, they are in some ways so qualified to undertake it that leadership would probably be forced upon them. Several of our statesmen have insisted that when this war is over the British peoples will have to continue in the leadership to which they have already committed themselves. This cannot be denied. Neither can we deny the logical corollary that if we are to act as leaders we must make ourselves more fit for the task.

Mention has been made of the futility of forcing action upon a man or a nation without enlistment of the reason. In this regard it must be noted that the statement is commonly made that the nations overrun by the Nazi hordes are not conquered, that the country may be in the hands of the enemy and the people virtually enslaved, but that their spirit has not been broken and that the nation will one day rise again, a people freed from oppression. In other words, the reason of the people in these overrun countries has not been brought into subjection. This is heartening to all lovers of freedom. We need, however, to remember, that after the conclusion of hostilities, when the British Commonwealth of Nations is victorious, as we hope and pray, nay, feel certain, it will be, we shall have to deal with conquered races resentful of any conditions imposed on them and ready to cherish that resentment until yet another opportunity for revenge arises, no matter how far distant that opportunity may be. This is why it is so important that every man and every woman among us should try to determine his or her motives in the present struggle. This is why, after this self-examination, which must be ruthless and complete, every one of us will have to try to fit himself to take a part in the building of the new world order. Unless we do this we shall not be in a position to appeal to the reason of those who are at present our enemies.

In any dispassionate survey of British history during the last few years it is unfortunately true that little justification can be found for a claim to leadership by the British peoples in the adjustment of a world whose

social order is completely *bouleversé*. This is a sweeping statement; but it is essentially true. Leaving aside international relationships of the last few years and the lamentable attempts made to adjust some of them, we find in the state of British society a burning witness to British ineptitude. No country is qualified to bring order out of chaos in another land when it can tolerate within its own borders extreme poverty, unemployment, bad housing, incomplete protection against disease and social injustice, using as a panacea a soul-destroying dole. This is not politics; it is common sense. There is something fundamentally wrong with a country which can spend millions a day on a war and cannot find a fraction of that sum in peace-time to give its people a chance to earn a living, decent places of abode, protection against all forms of disease and some hope of security. These strictures are true of all the British nations, but truer perhaps of the Home Country than of at least some of the Dominions. As a witness we may call a recent "Aylesbury Broadside", a pamphlet issued by *The Lancet*, in which a plea is made for an adequate provision of family allowances for Great Britain such as are provided in parts of Australia and in New Zealand.

Naturally the question will be asked: "What is the remedy?" "How can a nation that has failed in the past, hope to change its own character in such a way that it will command the attention and appeal to the reason of a defeated enemy, perhaps after or during a period of enforced obedience to certain reasonable restrictions?" There is only one reply—and it involves a fundamental change in many persons and a realization that virtue, love and idealism are the only regenerators of a lost humanity. It means a realization by man of his complete insignificance in the physical universe and at the same time of the enormous power that he may wield because of his relationship with the divine and the eternal. It means the abandonment of materialism and commercialism and the substitution for them of the practice of Christian morality in private life, in industry and in the public life of the State. Most men acknowledge the existence of a supreme being or at least of a superior power, which has something to do with the direction of their paths and the fashioning of their ends, and which some of them refer to grudgingly or shamefacedly as Providence. This being, this power, known to others as the one who is good, or God, stands for certain rules of conduct, certain values, certain principles, which alone can lead stricken humanity in its present distress. Man needs to stand stripped naked of all pretence, of all hatred, of all lying, of all greed and of all else that spells death to his spirit, and to put on the armour of right thinking, of right acting and of right living—in short, the armour of Christian morality. It is not too late for this miracle to happen. There are in fact indications that it may be happening already, for we are told on every hand that England is a wholly united country. Again, this is a question of motive. If the union is merely for the winning of the war we must not be too hopeful; if it is grounded more deeply, the signs are propitious. When this attitude of mind, this standard of conduct, is spoken of as a remedy it is clear that it is only the basis on which all other effort must be made. Alone it can effect nothing; but as a foundation it is unshakable. People whose conduct is determined by the considerations here described are qualified to be the leaders of the future. In proportion as the rank and file are actuated by the same motives, so will the nation be ready for the days of trial that still lie before it.

Current Comment.

ALCOHOLISM.

THE use of nauseating drugs in the treatment of alcoholism is not new. Similar unpleasant substances have been given to tobacco addicts. Results on the whole have not been satisfactory. As a general rule no method of treatment is much good unless it provides for a psychological approach. The patient treated with nauseating substances regards the cure as worse than the disease, and as soon as he can escape from his nausea he returns to his habit. A new view of the treatment of alcoholism by the induction of nausea is given by Walter L. Voegtlin.[1] His idea is to establish a conditioned reflex, as a result of which nausea and vomiting occur in response to the sight, smell and taste of alcohol. He points out in passing that a person who has experienced nausea and vomiting after eating putrescent food may for years have an aversion to or distaste for the particular article of food which he believes to have been responsible for his symptoms. He may attribute his symptoms to the wrong thing and have a distaste for some article of food that was not concerned in his illness.

Voegtlin admits the patient to hospital and submits him to treatment at five, six or seven sessions, during a period of five days or more. No food except liquids and no sedatives are given for twelve hours before each session. The patient is taken to the treatment room and made comfortable. Voegtlin stresses the importance of attending to the patient's physical comfort. Apparently he endeavours to make the ensuing torture as refined as possible. The room is made sound-proof to prevent the entry of extraneous stimuli, such as street noises *et cetera*, and the lights are subdued with the exception of a spot-light shining on a table set with an array of various kinds of liquor. The object of the spot-lighting is to enhance visual stimulation. The patient is then given a hypodermic injection of six to twelve minims of a solution with the following formula:

Emetine hydrochloride ..	50 grains
Pilocarpine	25 grains
Ephedrine sulphate	23 grains
Water	40 cubic centimetres

Pilocarpine is given not only for the psychical effect of its production of sialorrhœa and diaphoresis, "but also because of the feeling among older writers that it helps combat the physical taste for liquor". Ephedrine is used to maintain the blood pressure. Sometimes the blood pressure falls alarmingly, even to the point of collapse. Voegtlin says that a fall of systolic pressure to below 100 millimetres of mercury is an indication for rest and the continued administration of ephedrine.

The patient is told casually that the injection is given as a stimulant to support him during the subsequent nausea. The correct dosage is found by experience; the amount depends not so much on body weight as on the patient's personality. Nausea should commence two to eight minutes after the injection. The first drink of alcohol is given immediately prior to its onset. Voegtlin does not give any hint as to how the physician is to ascertain when nausea is about to commence; but he states: "It is of paramount importance that this first offering of liquor should be given within several seconds before the onset of nausea and certainly under no conditions should it be withheld until either nausea or salivation has appeared." If the drink is given prematurely the onset of nausea may be hastened by the oral administration of one or two grains of emetine. When nausea

[1] *The American Journal of the Medical Sciences*, June, 1940.

has commenced, all kinds of liquor are forced on the patient, care being taken to ensure his sniffing deeply at each empty glass. Warm water is given freely, to afford easy emesis and prevent retching. After the patient has vomited he is again plied with various liquors until nausea has begun to wane. The stomach is then washed out through an Ewald tube. The patient is then wrapped up and left in the treatment room, where he remains until diaphoresis (induced by the pilocarpine) has ceased.

An occasional patient is unable to vomit, despite severe nausea. His stomach must be washed out promptly. "Absorption of alcohol to the point where an effect is noted by the patient will vitiate the entire treatment." A few patients do not even experience nausea. They are given a hypodermic injection of one-fortieth to one-twentieth of a grain of apomorphine in addition to the emetine. Voegtlin stresses the need for care in the use of this drug; for "approximately 30% of the patients so treated develop alarming syncope coupled with marked bradycardia amounting in a few instances to complete momentary cardiac standstill coincident with the nausea". He also states that pilocarpine should not be given when apomorphine is used.

In Voegtlin's experience, patients subjected to this treatment develop a great aversion to the sight and smell of alcohol. Usually this "is sufficient to cause the patient to avoid alcohol without the more dangerous experiment of tasting liquor that he may satisfy his curiosity relative to his inability to drink".

Six months after treatment 97·3% of Voegtlin's patients were still abstainers; but at the end of another period of six months the percentage had fallen to 65·7. Voegtlin argues from this that the treatment should be repeated after the first six months. The percentage of patient's apparently permanent cured was about 64·3. Relapse was more likely in the younger patients. No correlation was noted between relapse and the severity or duration of addiction. Wine drinkers were the most difficult to cure, then beer drinkers, then drinkers of distilled liquors, such as whisky. Relapse was more common among women.

Alcohol is difficult to escape these days; therefore it would seem that any person with a satisfactory conditioned reflex to the sight and smell of it must live as a hermit if he would avoid incessant nausea. However, Voegtlin's method may be a good one. We cannot deny that nausea, or even emesis, in the presence of liquor is preferable to an uncontrolled appetite for the stuff. The treatment would be improved if provision was made for psychotherapy, as Voegtlin admits. However, endeavours were made through social workers to find employment for the patients, to smooth away domestic difficulties *et cetera*. "It is felt that this work is of the greatest importance in aiding the reclaimed alcoholic to find his lost position in society." With this statement we heartily agree. If the man is denied a return to a normal existence, relapse may be expected.

PULMONARY MYCOSIS.

THE science of mycology has applications of well-recognized importance to agriculture, architecture, food marketing and various other spheres of human endeavour; but interest in its application to medicine has been intermittent for many years. In fact, clinical bacteriologists of hospitals view with a certain misgiving the publication of a new article on fungous disease in man in a popular medical journal, dreading the arrival of specimens to be examined for fungi from many a well-known old bronchitic of the out-patient department. Still, a recent succinct review of our knowledge of pulmonary mycosis by R. Fawcitt[1] will be welcomed by those who are interested in the study of diseases of the chest.

Fawcitt states that the incidence of pulmonary mycosis appears to be largely geographical or occupational or both; for example, actinomycosis, aspergillosis (bird fancier's disease), penicilliosis and *Mucor* mycosis, diseases due to the common fungi of decaying vegetable matter, occur mainly among the farming community, while the fungi of rotting timber have caused pulmonary disease in miners; although moniliasis, described by Castellani as "tea taster's cough" in Ceylon, has since been recorded as occurring in all parts of the world. Fawcitt points out that the symptoms of different types of pulmonary mycosis vary to some extent according to the causal fungus, but that certain features are common to most varieties. The outstanding symptom is dyspnœa, the onset of which is as a rule gradual. There is cough, accompanied by sputum which is frothy and scanty in the early stages but becomes purulent should the disease become chronic. There is often slight pyrexia and the clinical picture may resemble that of bronchiolitis. Late results of the malady include areas of consolidation or excavation in the lungs, bronchiectasis with copious sputum having the odour of brewer's yeast, and very extreme shortness of breath. The morbid process, except in actinomycosis, is usually bilateral from the early stages.

As a radiologist Fawcitt pays particular attention to the X-ray appearances of the mycotic lung and follows these through four stages which he distinguishes in the course of the disease: the first characterized by exaggeration of the lung markings; the second by fine mottling, especially in the middle and lower zones, rather resembling that seen in sidero-silicosis; the third by denser mottling and increased hilar shadows; and the fourth by dense coalescent patches representing fibrosis, emphysema and probably basal bronchiectasis.

The sputum of the person suspected to be suffering from pulmonary mycosis will usually have been searched repeatedly for tubercle bacilli, and Fawcitt would have done well to advise that these should have been sought by cultural methods before being regarded as absent. The quest for fungi would appear to require a more careful technique than is sometimes employed. It is desirable, according to Fawcitt, to collect the specimen of sputum actually in the laboratory, the patient having first rinsed out his mouth and gargled with normal saline solution and then with sterile water—a preliminary cleansing of the teeth has been suggested, but "in some cases this stirs up too much latent mud". The patient expectorates directly into the prepared Petri dish, which is exposed to the air as little as possible, for *fungi imperfecti* are ubiquitous. The culture medium employed is "beerwort agar" or the medium of Sabouraud or potato or carrot media. Any colony which occurs at any site other than that of inoculation on the plate, especially if it is near the edge, must be regarded as a contaminant and any fungus growing at any temperature other than round about blood heat is probably non-pathogenic. Controls are said to be essential.

When the diagnosis of pulmonary mycosis is suspected investigation is more likely to be conclusive if special attention is given to a number of points: inquiry into the occupational history and the possible source and mode of infection; the clinical examination, in which dyspnœa out of proportion to other symptoms is especially noteworthy; the examination of the sputum for fungi after failure to recover tubercle bacilli; the application of intradermal tests; the X-ray examination; possibly animal experiments; and finally the administration of potassium iodide and the observation of any therapeutic effect of the drug. The use of potassium iodide is said to be very beneficial for pulmonary mycosis; indeed, Fawcitt states that it has a "selective action" on the fungi.

There can be little doubt that the label of tuberculosis is occasionally stuck on persons who are really suffering from fungous disease of the lungs; but the importance of the malady is limited by its comparative rarity, and it cannot be very contagious. Nevertheless, a pretty story of fungological ingenuity worthy of Dr. Fu Manchu is told of the Watusi of central Africa. The story goes that they used to exhume the corpse of a person who had died of aspergillosis, remove, desiccate and pulverize the lungs and mix the powder with banana beer, which was offered with every show of cordiality to an enemy or insufferable rival; the result they regarded as one of the most exquisite forms of lingering death.

[1] *The London Hospital Gazette*, June, 1940.

Abstracts from Medical Literature.

MEDICINE.

Altitude and Artificial Pneumothorax.

C. H. GELLENTHIEN (*The Journal of the American Medical Association*, March 2, 1940) points out that a person with an artificial pneumothorax may suffer abrupt disturbance of the equilibrium of a perfect collapse, considerable discomfort or even serious respiratory difficulty as the result of any very considerable decrease in the atmospheric pressure. Such a decrease in pressure may occur during an aeroplane journey, for commercial aircraft now fly at a minimum altitude of 2,000 feet above the ground, while in crossing mountain ranges much higher altitudes may be reached. The author has produced a graph which shows that a person with a pneumothorax should not ascend higher than 2,000 feet within four days of a refill, nor higher than 3,000 feet within eight days.

Anæmia in Diaphragmatic Hernia.

S. C. DYKE AND G. E. DYAS (*The Lancet*, January 20, 1940) report two cases of diaphragmatic hernia, both of which were investigated first because of anæmia. The conditions were recognized as para-œsophageal hernia of the stomach only when the patients were given barium meals for associated gastric symptoms. The anæmia in both cases was of the hypochromic type and responded readily to iron in full doses. The improvement in the hæmoglobin percentage was accompanied by disappearance of practically all symptoms. The cause of the anæmia in these cases is obscure; it was certainly not due to gastric ulceration, nor was it of the pernicious type, and the authors conclude that there was failure in the assimilation of iron. The literature is summarized in a search for similar cases, and it is recalled that Murphy (1939) found herniation of the stomach in five cases of pernicious anæmia. Both patients in this report suffered from peculiar "turns", of a type described as faintness and lightheadedness, and one had distressing pains in the hands and feet, which were proved not to be due to subacute combined degeneration of the cord, and which responded to treatment with "Marmite". It is suggested that diaphragmatic hernia is more frequent than is generally supposed, many cases being comparatively symptomless and discoverable only if clinicians are on the lookout for them. Many are amenable to surgery. Obscure cases of anæmia should be subjected to careful radiographic investigation.

Acute Nicotinic Acid Deficency.

N. JOLLIFFE, K. M. BOWMAN, L. A. ROSENBLUM AND H. D. FEIN report on 150 cases of a syndrome due to acute nicotinic acid deficiency (*The Journal of the American Medical Association*, January 27, 1940). The syndrome is characterized by clouding of consciousness amounting to stupor in severe cases, uncontrollable sucking and grasping reflexes, cogwheel rigidity of the limbs, continued fever and dehydration. It may be associated with polyneuritis due to vitamin B_1 deficiency or with pellagra or oculomotor signs of central neuritis. The syndrome frequently occurs in chronic alcoholism, with its associated gastric and intestinal inflammation, and may be associated with *delirium tremens*. Patients manifesting this syndrome almost invariably die when treated by standard hydration methods, even if supplemented by thiamin chloride (vitamin B_1). When patients were treated with substances rich in the vitamin *B* complex, however, it was found that they tended to recover slowly. When nicotinic acid was given in large doses a rapid and complete recovery was obtained in a large proportion of cases. Dehydration must receive appropriate treatment at the same time. Nicotinic acid was given in doses of 100 milligrammes every hour for ten hours, then 100 milligrammes daily until convalescence. The patient was then given a high-Calorie, high-vitamin diet with added mixed vitamin *B* extract. The authors consider that this form of encephalopathy is due to a sudden complete deprivation of nicotinic acid, and suggest the name of nicotinic acid deficiency encephalopathy.

The P-R Segment in Hypertensive Heart Disease.

L. HAHN (*British Heart Journal*, April, 1940) has examined records of 200 electrocardiograms of 99 men and 101 women with an average age of 51 years and an average systolic blood pressure of 187 millimetres of mercury, the lowest being 160 millimetres. A pathological depression of the *P-R* segment was found in 74% of cases, such changes occurring in only 24% of cases in 500 unselected cardiograms. The most frequent alteration occurred in Lead II or Leads II and III. There was no evidence of any relation between the incidence of these changes and cardiac enlargement; there was, however, a greater incidence of left preponderance in the group with *P-R* segment changes than in those who showed no such depression. These alterations could not be correlated with mitral incompetence secondary to high-grade dilatation of the left ventricle, nor with right ventricular and subsequent right auricular stress. The clinical features provided a better indication of the underlying pathological change. The group with *P-R* segment changes were of greater average age, there was a greater frequency of ischæmic heart disease (coronary thrombosis and bundle branch block) and on the whole they were more seriously ill. It is suggested that the ultimate cause for this change in the *P-R* segment lies in arteriosclerotic changes in the auricular branches of the coronary arteries, causing an insufficient blood supply, or ischæmia, of this part of the heart muscle.

Hodgkin's Disease.

LEONARD B. GOLDMAN (*The Journal of the American Medical Association*, April 27, 1940) presents an analysis of 212 proved cases of Hodgkin's disease, which occurs most frequently in men between the ages of twenty and forty years. In this series the author notes that there were no demonstrable predisposing factors, that 79% of the patients complained of lymph gland enlargement as the first symptom of the disease, that unilateral lymphadenopathy was more common than symmetrical involvement in early cases, that splenomegaly was not frequent in early cases, and that enlargement of the spleen could as a rule be discovered by palpation in autopsy studies. Analysis of these cases also indicated that there was no typical radiological picture of the mediastinum in Hodgkin's disease, that the mediastinal glands did not become enlarged without enlargement of the superficial glands, that in 38% of cases cutaneous lesions varying from pruritus to multiple nodules were present, that 6·6% showed radiological evidence of involvement of the osseous system, and ten patients developed diplegia as a result of epidural invasion. The analysis did not reveal any constant typical hæmatological changes; but the most common feature of the blood picture was a diminution in the lymphocytes with an increase in monocytes. A continuous low-grade type of pyrexia was noted in most cases, but the Pel-Ebstein syndrome was uncommon. Among the author's patients the average duration of life after onset of symptoms was 32·06 months, and after the institution of therapy was 23·8 months. The author states that the disease presents wide variations in virulence, clinical course and response to treatment.

Epilepsy and Migraine.

W. G. LENNOX (*The New England Journal of Medicine*, April 18, 1940) discusses the ætiology and the treatment of epilepsy and migraine. The hereditary factor is important in both conditions. Removal of worries and fatigue, the lessening of emotional stress, the regulation of habits, and in some women the administration of large doses of "Theelin" are helpful. Sodium diphenyl hydantionate (dilantin sodium), one and a half grains, given three times a day after meals, is without effect in many cases of epilepsy, whereas in others it acts like a charm. Toxic symptoms are ataxia, tremors, gastric pain or distress, skin rashes, gingivitis and psychic upsets. When phenobarbital is being administered it should not be rapidly withdrawn. Migraine should be relieved in most cases by hypodermic injection of 0·5 milligramme of "Gynergen" (ergotamine tartrate) at the onset of symptoms. Nausea, vomiting, lassitude, muscle soreness or precordial pain may occur. Ergotamine tartrate is also prescribed in one-milligramme tablets. Five to ten milligrammes may be taken in the course of a headache lasting some hours. The drug may be vomited and it is poorly absorbed from the stomach, so that it is unlikely to relieve a severe migraine if taken by mouth. Ergonovine, also called ergometrine, ergobasine tartrate, ergotrate and ergoklonin, has also been employed with effect in the oral treatment of migraine. It is less effective than ergotamine tartrate given hypodermically, but it is less toxic and causes less nausea than that drug.

Digitalis in Heart Failure with Normal Rhythm.

PAUL WOOD (*British Heart Journal*, April, 1940) describes the effects of digitalization on the venous blood pressure and pulse rate in a series of twenty cases of congestive heart failure with normal rhythm and of varying ætiology. The degree of right ventricular failure was estimated by direct measurement of pressure in the antecubital vein. No other criteria were used. In no case was a fall in venous pressure associated with an aggravation of symptoms, apparent enlargement of the liver, increase of

œdema or with apparent diminution of urinary output. A few cases of left ventricular failure were also included, and the degree of pulmonary congestion was estimated by the decholin method of arm-to-tongue circulation time. Of this series of fifteen cases of right and five cases of left heart failure, eighteen responded to digitalization and two did not. The series included twelve cases of hypertensive heart disease; only one was rheumatic. If rheumatic heart disease responds better to digitalis than all other ætiological types, it must respond very well indeed. It was determined that a fall in pulse rate was not essential to improvement in the venous pressure. Further, the hypothesis of constriction of the hepatic veins and damming up of blood in liver and spleen, or bloodless venesection, was refuted by one carefully controlled observation by serial skiagrams of liver and spleen following the use of "Thorotrast" and digitalization. The reduction in the size of the liver was also checked clinically. All the patients were ordered complete bed rest and sedatives for at least a week, no other medication being given; any significant improvement during this stage excluded the patient from further study. The others received powdered digitalis leaf in doses of nine grains on the first day, six grains on the second, and three grains thereafter, until therapeutic effects or symptoms of intoxication were observed.

Migraine and Biliousness.

D. M. LYON (*Edinburgh Medical Journal*, March, 1940) draws attention to the difficulty in distinguishing between migraine and ordinary biliousness. All sick headaches are not migrainous. It is probable that migraine should no longer be regarded as a simple pathological entity, but as a symptom complex which may arise in various ways in different individuals. In order to regularize the diagnosis of hemicrania, certain criteria are suggested, namely, a family history of periodic headaches, an early age of onset, recurrent seizures with prodromal signs and auræ or intense headache accompanied by more or less nausea and vomiting, and complete interval freedom. The most typical example of migraine is probably that dependent on eye strain. This summary follows an exhaustive account of migraine in all its aspects. The bilious attack or sick headache seems to have its onset during the second decade, with a family history in most cases; the seizures recur at irregular intervals without a definite aura, but usually prodromata, such as a feeling of "good for nothing" and upper abdominal discomfort; complete anorexia passes quickly to intense nausea with vomiting; the duration of the attack is from two to forty-eight hours, and it is followed by normal health. The most important precipitating cause seems to be a period of sedentary inactivity or too little exercise associated with overeating or other dietary indiscretion. It will be seen that the description of these two conditions is very similar, and if the term migraine is taken in its widest sense it will include biliousness. The importance in differentiation lies in the elucidation of the ætiology and the rationalization of the therapy. Chronic duodenal ileus is suggested as a possible cause for the recurrent attacks of biliousness, and an impending attack can often be aborted by postural methods. The clinical features are essentially those of the bilious attack, but the disorder can be diagnosed with certainty only by X-ray examination or at operation. A muscular hypertrophy of the proximal part of the duodenum suggests that the superior mesenteric vessels, as they cross the third and narrowest part of the duodenum, may be responsible for some degree of obstruction. A mild degree of visceroptosis will accentuate the drag on the mesentery and its vessels.

Cancer of the Pancreas.

J. E. DUNPHY (*The American Journal of Digestive Diseases and Nutrition*, February, 1940) discusses the early diagnosis of cancer of the pancreas and makes special reference to the symptoms before the onset of jaundice. The author states that painless jaundice is often erroneously cited as the classical picture of cancer of the pancreas, whereas actually in the majority pain is a prominent symptom, even before the onset of jaundice. Persistent upper abdominal pain extending into the back, worse when the patient is lying down, and unrelated to meals, is regarded by the author as a particularly suggestive diagnostic feature, as are very rapid cachexia and loss of weight. Attention is directed to the importance of nervous symptoms, such as depression, anxiety, insomnia, headache, and irritability, as early manifestations of cancer of the pancreas, and the author gives clinical notes of two such cases wherein an erroneous diagnosis of psychoneurosis had been made early in the illness. The unusual complaints of intractable diarrhœa, persistent nausea unrelated to meals, or a peculiarly unbearable type of epigastric distress, in the absence of adequate explanation, may suggest an early diagnosis; and if the condition is associated with persistent abdominal pain and loss of weight without radiological evidence of a gastro-intestinal lesion, surgical exploration is indicated. The author states that X-ray examination is usually of no value in cancer of the pancreas, but that there are three positive findings which are of diagnostic import in a radiological examination, namely, a widening of the duodenal loop, pressure defects of the duodenum or pylorus, and in cancer of the tail of the pancreas pressure defects of the greater curvature of the stomach.

Scleroderma.

W. M. PEREZ, L. J. SOFFER AND S. SILBERT (*The Journal of the Mount Sinai Hospital*, March-April, 1940) publish a report of improvement in two cases of diffuse scleroderma in which the patients were treated with "A.T.10" (dihydrotachysterol). Scleroderma has been treated by sympathectomy, parathyreoidectomy, iontophoresis and with mecholyl with varying results. The ætiology is uncertain; recent reports concerning calcium metabolism and studies have shown the calcium content of the skin to be increased by 20% or 30%. "A.T.10" has been used in the treatment of tetany and in *impetigo herpetiformis* with hypocalcæmia. The first patient, a woman, aged forty-four years, had been submitted to parathyreoidectomy, right cervico-thoracic ganglionectomy, intensive iontophoresis and mecholyl for three months; then she had been treated with histamine for some months and was given a second course of mecholyl therapy. The last-mentioned treatment alone had been associated with some improvement in the skin condition. A series of injections of pancreatic tissue extract was then given for six months without effect. At this stage she presented the typical appearance of advanced scleroderma. Treatment was begun with one cubic centimetre of "A.T.10" every day, and after one month the dose was reduced to 0·5 cubic centimetre every day. At the end of six weeks great improvement was noted in facial mobility and expression; the skin was softer and its colour less white. Some ulcerations of the fingers due to associated Raynaud phenomenon had healed and mobility of the fingers had increased. The second patient, a man, aged fifty-five years, had had scleroderma of thirteen years' duration, affecting face, neck, chest, hands and feet, with ulcers on the index finger and the heel. One cubic centimetre of dihydrotachysterol was given each day; improvement was noted in one week, and became steadily more pronounced. The ulcers healed in two weeks, mobility of the fingers increased, and the subjective sensation of the skin of the face improved. After six weeks a striking improvement was noted. In both cases the calcium intake was 100 milligrammes a day and the total urinary output was 85 milligrammes, giving a calcium balance of +12 before treatment was commenced. "A.T.10" promoted phosphorus excretion in the urine and favoured calcium absorption and retention. Overdosage can cause toxic effects, and for this reason it is advisable to limit this treatment to patients under hospital observation, where laboratory controls of blood calcium and phosphorus and calcium intake can be made and urinary output can be determined.

Indices of Anisocytosis.

L. VAN DEN BERGHE AND E. WEINBERGER (*The American Journal of the Medical Sciences*, April, 1940) describe a simple method, which, by the calculation of the diameters of the red blood corpuscles and the recording of these in three groups according to their size, allows a numerical value to be given to anisocytosis in the human blood. The same value may be determined for anisocytosis in the reticulocytes. The method clearly demonstrated the improvement resulting from treatment with liver extract in pernicious anæmia four days after the commencement of treatment.

Fatal Massive Hæmoptysis.

R. CHARR AND J. W. SAVACOOL (*The American Journal of the Medical Sciences*, May, 1940) studied clinically, pathologically and by pulmonary arteriography after death twelve cases of fatal massive hæmoptysis, which accounted for 5% of the deaths from tuberculosis at a certain sanatorium. In every case the tuberculosis was chronic, with considerable fibrosis, but in no case did the hæmoptysis result from the rupture of one of the cord-like structures which often cross pulmonary cavities. The ruptured vessel was found in ten of the cases, and in eight of these it was the first main branch of the pulmonary artery, which lies at the level of the second costal cartilage, slightly medial to the parasternal line. The authors state that when pulmonary cavities are small and located peripherally only arterioles are in their vicinity, and when hæmoptysis occurs it is probably never massive; but when a cavity becomes larger and encroaches on the vicinity of the main trunk of the first branch of the pulmonary artery fatal hæmorrhage becomes a distinct possibility.

Special Articles on Psychiatry in General Practice.

(Contributed by request.)

XII.

GENERAL PARALYSIS OF THE INSANE.

GENERAL paralysis of the insane occurs between the ages of thirty-five and fifty, and is four times as common in men as in women. Juvenile general paralysis of the insane, the hereditary form of the disease, occurs from the age of twelve onwards, and is equally common in both sexes. The proportion of syphilitics who develop general paralysis of the insane is 3%.

The signs and symptoms of the disease can be divided into three distinct categories, each of which must be given its due weight.

Mental Symptoms.

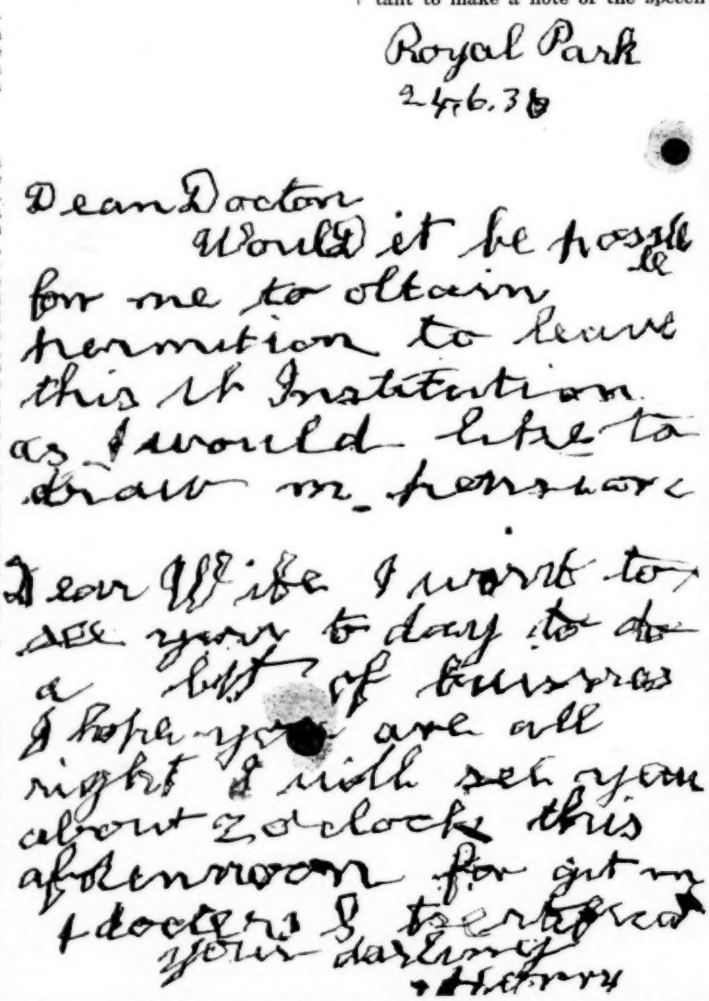
The earliest symptom is a change in the character of the patient. A man who has been a good workman becomes slovenly and careless, the clerk makes mistakes in his figures, the family man who used to be even-tempered becomes irritable with his wife and children, and the man who has been sober all his life begins to drink. When remonstrated with, he either becomes irritable and says he knows perfectly well what he is doing, or else he passes the matter off with plausible excuses and does the same thing next day. Sometimes there is an indefinable change of character, first observed by his wife, who will say that her husband has changed, but she cannot say in what way.

A peculiar characteristic is for the patient to buy a large number of the same articles and often give them away to total strangers. One man decided he would do some gardening, went into town and bought five rakes, three spades, four grass cutters and an indefinite length of hose.

Sooner or later the man loses his position, but this does not worry him in the least—"he will get a much better one in a few days"—and the family is landed in financial difficulties. Sometimes the patient first develops an inordinate jealousy against his wife, accuses her of infidelity, and a previously happy marriage goes to pieces.

Suspicion is aroused when a patient arrives at the consulting room saying: "There is nothing the matter with me, doctor, I never felt better in my life" (all general paralytics never felt better in their lives), "but my wife thinks I ought to see you."

All these mental symptoms may occur without the patient having any definite delusions, and frequently it is difficult to say that the patient is insane, as for every delinquency he can provide a disarming and plausible excuse, which will deceive the most careful clinician.


Royal Park
246.36

Dear Doctor
Would it be possible
for me to obtain
permission to leave
this Institution.
as I would like to
draw my pension

Dear Wife I want to
see you to day to do
a list of business
I hope you are all
right I will see you
about 2 o'clock this
afternoon for got my
doctors I remained
your darling
Harry

Physical Signs.

Abnormalities of the pupils are among the earliest manifestations of this disease. One pupil may be larger than the other; the pupils may be eccentric, irregular in outline and sluggish in their reactions. The consensual reflex disappears very early. Frequently there is an Argyll-Robertson pupil. A very characteristic peculiarity is that one day one pupil will be larger than the other; the next day their sizes will be reversed. Optic atrophy is usually a very late change.

Tremors of the tongue, the in-and-out trombone tremor, tremors of the facial muscles, particularly a slight twitching of the naso-labial folds, are present, and the face itself loses its emotional expression and looks as if it had been ironed out.

The speech is slurring, the patient is unable to pronounce each syllable distinctly when asked to speak quickly. If given test words like "British constitution", he may be able to take particular care and pass the test; it is more important to make a note of the speech at the end of sentences, when the muscles become tired.

Sometimes the handwriting is an early sign of the disease. The patient's writing is shaky and he has a tendency to omit letters or syllables, and the writing becomes worse at the end of the letter. This is shown in the accompanying reproduction of a letter. On extension of the hands and fingers tremors are apparent.

The deep reflexes are often increased and may be unequal; in the tabetic type of general paralysis of the insane they are absent.

Not infrequently the first and earliest sign to cause any suspicion, even before the onset of any mental changes, is the sudden onset of apoplectiform seizures. The patient appears to have an ordinary hemiplegia due to a cerebral thrombosis, with paralysis of the face, arm and leg, even associated with stertor and coma, and he recovers complete use of his faculties and limbs in about two or three days. Such an attack with an unusually quick recovery should arouse the gravest suspicion of general paralysis of the insane. Sometimes a series of epileptiform seizures is the starting point of the disease.

Occasionally a man who has *tabes dorsalis* develops mental symptoms in addition.

Serological Tests.

If any or all of the above-mentioned mental or physical signs are present, general paralysis of the insane must still not be diagnosed, but only suspected. The final court of appeal is in the hands of the serologist. A specimen of the blood must be taken, and the Wassermann test elicits a positive reaction in 98% of cases of general paralysis. The cerebro-spinal fluid yields a positive reaction in about 90%; there are an increase of leucocytes, increase of globulin, and, most significant of all, the colloidal gold test shows the characteristic curve of general paralysis. The only other disease with a similar curve is disseminated sclerosis, which should be easily distinguished by the failure of the blood to yield a positive reaction. No case must be diagnosed as general paralysis of the insane if the serological reactions are absent, no matter how many signs and symptoms are present, and no matter how exalted the patient's delusions.

Differential Diagnosis.

The differential diagnosis must be made from neurasthenia, cerebral tumour and from alcoholic pseudoparesis. Sometimes a patient complains of feeling tired, of inability to do his work, and of loss of memory, the whole picture resembling that of neurasthenia. The serological tests are the only reliable method of differentiation, and every neurasthenic should have his blood tested by the Wassermann test; and, if the reaction is positive, further investigation of the cerebro-spinal fluid must be undertaken.

Treatment.

The treatment in all cases is malarial or hyperpyrexial therapy, followed by a course of antisyphilitic remedies. If the patient's condition is diagnosed in the early stages, preferably before any mental symptoms have arisen, the results of treatment are excellent. No treatment can repair neuronic fibres which have degenerated; consequently many patients whose disease has been arrested are now living in mental hospitals, but they are unable to return to their work. Practically all of these patients, if their condition had been diagnosed early, could have been cured and made fit to return to their work, with benefit to themselves and their families and a saving of expense to the State.

Conclusion.

Persons in the early stages of general paralysis of the insane are not seen by a psychiatrist, but by a general practitioner, and all psychiatrists appeal to all general practitioners to be on the look-out for cases of general paralysis of the insane in the earliest stages; if they have the slightest suspicion that the patient may be suffering from this disease, to take specimens of the blood and cerebro-spinal fluid so that the necessary serological tests may be made with the least possible delay.

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British Medical Association News.

SCIENTIFIC.

A MEETING of the Victorian Branch of the British Medical Association was held in the Medical Society Hall, East Melbourne, on July 3, 1940, DR. H. C. COLVILLE, the President, in the chair.

Syphilis and Gonorrhœa.

DR. KENNETH MCLEAN read a paper entitled "The Diagnosis of Syphilis" (see page 258).

DR. WESTMORE F. STEPHENS read a paper entitled "Gonorrhœa" (see page 255).

DR. J. R. HEATH opened the discussion by emphasizing the importance of very early prophylactic treatment. Dr. McLean had indicated that if it was carried out within twenty-four hours it would be effective; Dr. Stephens had reduced the interval to six hours; but Dr. Heath would like to insist on the procedure being conducted within four hours of intercourse.

He also wished to mention the importance of testing the damage done by arsenical treatment, especially to the liver and kidneys, before subsequent arsenical medication was given. It was a simple procedure to test the urine for albuminuria with Esbach's reagent; and it was his practice to give each patient a drink of ten ounces of a 10% solution of glucose half an hour before making an injection, with the object of protecting the liver from damage. It was prudent to be prepared for immediate toxic manifestations after giving arsenical injections; there should always be some adrenaline solution (1 in 1,000) handy on the table for prompt use; and he had found it useful to converse with the patient, because failure to answer normally was evidence of toxæmia.

Dr. Heath thought that it was advisable to stipulate that every patient suffering from syphilis should be under continued observation for at least two years, even though it was not necessary for him to be receiving treatment all the time. He was of the opinion that he got better results by combining intravenous arsenical medication with intramuscular injections of bismuth or mercury; one could with advantage give smaller dosage of the arsenical than would be necessary if it were being used alone; and the two methods of attack were complementary, as the intravenous therapy was quickly effective, the drug was quickly eliminated, and the intramuscular reservoir of bismuth was slowly absorbed and slowly eliminated.

He went on to say that it was remarkable how many men were uncircumcised and were more likely to acquire venereal disease than the circumcised. No reference had been made to the important subject of female prophylaxis. He strongly advocated the establishment of a "follow-up" system by almoners of the contacts of the patients. Indiscriminate urethral syringing set up a discharge which would only disappear when the practice was discontinued. Instead of adding an uncertain quantity of crystals, a 1% aqueous solution of potassium permanganate should be prescribed for suitable subsequent dilution, but not for use by the patient himself.

Rather grudgingly Dr. Heath admitted that vaccine treatment was sometimes of some value; but he was much more definite about the efficacy of sulphapyridine treatment. He announced that he had had the recent experience of employing that drug in therapy in a military camp and had found the average stay of the patients in hospital to be three weeks, after which time they could be kept under observation by the regimental medical officer. It was important, however, that the patient should be examined by sounding six months later and again nine months after that, to avoid the possibility of stricture formation.

Finally Dr. Heath drew attention to the value of the routine testing for syphilis of the blood of patients with gonorrhœa; positive findings were obtained when least expected; very thorough search should be made for minute amounts of gonococcal discharge before a female carrier was declared free of infectivity.

DR. G. A. PENINGTON asked Dr. McLean to express an opinion on the suitability and dosage of "Mapharsen" in the treatment of visceral syphilis.

DR. M. O. KENT HUGHES asked whether Dr. McLean had formed an opinion concerning the value of fever therapy in congenital syphilis. He also asked Dr. Stephens to say how long irrigation treatment should be continued in combination with sulphapyridine therapy in gonorrhœa.

DR. KENNETH SMITH drew attention to the medico-legal aspect of the possibility of undetected infection with syphilis occurring concurrently with obvious gonorrhœal infection. He explained that in the Repatriation Department it was recognized that a widow was entitled to a pension if a man died of the effects of syphilis, though while he lived the soldier did not get a pension for it. Dr. Smith had had difficulty in getting information bearing on the probability, and would like to know if Dr. McLean or Dr. Stephens could supply any data.

DR. JEAN WHITE asked Dr. McLean what measures were advocated when a patient's serum persistently yielded the Wassermann reaction.

DR. M. M. ROSEFIELD asked Dr. McLean to discuss the subject of diagnostic puncture of buboes and to give an opinion on the place of lumbar puncture in the final assay of the cure of syphilis.

Dr. McLean, in reply, informed Dr. Heath that he was sorry that he had not had time to deal with many of the details of the subject, and was glad that Dr. Heath had raised so many interesting and important points. Dr. McLean admitted that he seemed to be in the wrong about the length of time after intercourse during which prophylactic treatment was likely to be reasonably safe; it was a fact, however, that many people did not present themselves for the treatment until long after the limit of four hours which Dr. Heath had mentioned; and he was in a position to state that, in his own experience, after proper prophylaxis instituted within twenty-four hours no patients had returned to him either with syphilis or with gonorrhœa. Dr. McLean informed Dr. Penington that many authorities relied on bismuth preparations in neurosyphilis and visceral lesions. "Mapharsen" was an arsenoxide, the effective dosage of which was about one-tenth that of "Neoarsphenamine"; it was much less toxic than the latter, but had still to be used with care in cardio-vascular conditions. He commented on the importance of following the directions to give "Mapharsen" rapidly; painful venospasm, especially in the shoulder of the arm used, was most likely to be avoided by making certain that the time taken from puncture of the skin with the needle to withdrawal of the needle was within thirty seconds. He also remarked that Ehrlich's original arsenical preparation for syphilis was an oxide, but he had discarded it on account of toxicity.

In reply to Dr. Kent Hughes, Dr. McLean referred to information he had obtained about a series of patients treated in Sydney, in which it was claimed that the application of heat was of material value in the success it attained. Locally, in Melbourne, it was conceded that it was a useful adjuvant in treatment. He remembered a patient he had treated for congenital syphilis over a long period; the serum had not failed to yield the Wassermann reaction until treatment by means of benign malaria was undertaken. He also observed that he did not think heat

application by short-wave inductothermy had come to stay, because simpler methods might produce equal results. He was of the opinion that the Wassermann-fast phenomenon was sometimes produced by the administration of arsenic week after week and would not be overcome without suspension of that form of treatment.

Dr. McLean, in reply to Dr. Kenneth Smith, said that in acute gonorrhœa, especially when a long redundant foreskin was present, a small primary sore might be masked or a small chancre in the meatus or just inside the urethra, giving rise to discharge, might be confused with gonorrhœa. Dr. McLean went on to say that mild urethritis occurred at times in secondary syphilis, which was very likely to be overlooked as a manifestation of syphilis. He also said that it was not uncommon to find that a patient with the late manifestations of syphilis was quite unable to recollect having had primary syphilis. Nevertheless Dr. McLean expressed the opinion that it must be a very rare occurrence to have syphilis without any manifestation of it if it was carefully sought after.

In reply to Dr. Rosefield, Dr. McLean observed that at Bulford the great majority of buboes that broke down were those that had been punctured; and further, he had reached the conclusion that it took an exceptional pathologist to find spirochætes in fluid obtained by puncturing buboes. He added that no patient whose treatment was commenced after the positive Wassermann stage should be discharged as cured without the performance of at least one lumbar puncture.

DR. WESTMORE STEPHENS, speaking of the amount of irrigation that should be carried out coincidently with sulphapyridine therapy, said that regular anterior irrigation should be performed daily for a week or ten days and then on alternate days, and should not be discontinued for three weeks.

Dr. McLean's comments about bubo puncture prompted him to state that during the past four months he had had the exceptional experience of obtaining assistance from that diagnostic method in two cases. In each of them dark-ground illumination had failed to reveal the presence of spirochætes, but positive results had been obtained after the injection of saline solution into inguinal glands. Dr. Stephens also stated that if only one lumbar puncture examination was to be made, it should be carried out towards the end of the first year following the primary manifestations of the disease.

A MEETING of the Victorian Branch of the British Medical Association was held on May 15, 1940, at the Royal Melbourne Hospital. The meeting took the form of a number of clinical demonstrations by members of the honorary staff of the hospital. Parts of this report appeared in the issues of August 10 and August 24, 1940.

Chondrosarcoma of the Chest Wall.

DR. IVAN MAXWELL showed a male patient, aged forty-seven years, who had been admitted to the Royal Melbourne Hospital on April 24, 1940. He had undergone appendicectomy fifteen years earlier and had sustained an accident to an eye three years earlier. His wife suffered from actinomycosis.

His present illness began four or five years earlier, when a lump developed on the right side of the sternum. It was not painful and it gradually increased in size until one year prior to the meeting, when the increase in size became more rapid. In 1938 the patient sustained a knock on the chest from a cow, and he had pain in the sternum for one week. In March, 1940, the lump appeared to become larger while the patient was doing heavy work; he stated that the increase in size was not sudden. At that time numbness and weakness developed in his right arm. Two weeks prior to the meeting the patient began to suffer from a cough with rust-coloured sputum, and since that time he had suffered from shortness of breath. His appetite was poor, he had been losing weight for one month, his bowels were open regularly, and micturition was normal. For the previous four years a cough with white sputum had been present.

When the patient was examined, on April 24, 1940, his temperature was 100·8° F., his pulse rate was 120 per minute and respirations numbered 26 per minute. On the right side the systolic blood pressure was 120 and the diastolic pressure 80 millimetres of mercury; on the left side the systolic pressure was 135 and the diastolic pressure 90 millimetres of mercury. The patient's respiration was rapid and distressed. The right pupil was larger than the left. Examination of the heart revealed that the apex beat was seven inches from the mid-line in the sixth left intercostal space; the heart sounds were clear. There were signs of fluid in the right side of the chest and some displacement of the mediastinum. The liver and spleen were palpable. Sensation was normal in the right arm, but power was diminished. A large mass was noted over the right side of the chest wall; it moved up and down and appeared to be attached to the sternum. No enlarged glands were palpable.

An X-ray examination was carried out and revealed a massive effusion displacing the mediastinum. A blood count gave the following information: the hæmoglobin value was 89%; the erythrocytes numbered 5,000,000 and the leucocytes 23,000 per cubic millimetre; the colour index was 0·89. Examination of a blood film revealed absolute neutrophilia, with a slight shift to the left; no abnormal leucocytes were seen. The pleural fluid was blood-stained and contained many erythrocytes and a few polymorphonuclear leucocytes. An attempt at culture yielded no growth of organisms. A biopsy was performed, and examination of the excised tissue showed that it resembled a chondroma. Another piece of tissue was taken for examination, and on that occasion an opening was made into a cyst containing mucinous fluid. Up to the time of the meeting about nine pints of fluid had been taken from the chest. Neither the Wassermann test nor the Casoni test elicited a reaction. After repeated biopsies the pathologist reported the lesion to be a chondroma.

Dr. Maxwell remarked that while the tumour was reported by the pathologist to be a chondroma, the clinical condition of the patient, and especially the large quantity of blood-stained fluid in the thorax, made the diagnosis of chondrosarcoma more probable.

Congenital Cystic Lung.

Dr. Maxwell then showed a female patient, aged nineteen years, who had been admitted to the Royal Melbourne Hospital on November 24, 1939, in the care of Dr. Hume Turnbull. Until five years previously she had had no illness, but at that time she contracted left-sided pneumonia. She had since had a persistent cough with sputum. The sputum had an offensive odour; the patient produced the largest quantity at night, when she "hung over the side of the bed to clear her lungs". The amount of sputum produced was about one pint a day. The patient had been tired and weak for the preceding few months and had had several cold sweats, mostly at night. Her appetite was good, her weight remained constant and her bowels were open regularly. Micturition was normal; menstruation had begun at the age of fourteen years, but the patient had not menstruated for the past three years. She slept poorly.

When the patient was examined on her admission to hospital her temperature was 98° F., her pulse rate was 120 per minute, and her respirations numbered 28 per minute. The systolic blood pressure was 110 and the diastolic blood pressure was 70 millimetres of mercury. No abnormality was detected in the throat. Examination of the heart revealed that the apex beat was one inch from the mid-line in the fifth left intercostal space. There was diffuse pulsation all over the lower portion of the sternum, and visible and palpable pulsation was present in the fourth and fifth intercostal spaces to the right of the sternum.

The heart sounds were regular; there were rough systolic and diastolic bruits at the apex. There was a systolic bruit at the pulmonary area, and the pulmonary second sound was accentuated. There were no abnormal sounds at the aortic area. The lung movements were equal; the percussion note was impaired at the base of the right lung. Expiration was prolonged on the right side anteriorly; there were high-pitched breath sounds with prolonged expiration at the angle of the right scapula; the breath sounds were somewhat diminished at the base of the right lung. There were rhonchi all over the thorax, with crepitations at the base of both lungs. No abnormality was detected in the abdomen or the central nervous system. Obvious clubbing of the fingers and some clubbing of the toes were present.

A blood count revealed that the hæmoglobin value was 107% and the leucocytes numbered 8,700 per cubic millimetre. Examination of a blood film revealed a shift to the left and monocytosis. Culture from the sputum yielded a growth of hæmolytic streptococci, green streptococci and *Micrococcus catarrhalis*. Neither the Casoni test nor the Wassermann test elicited a reaction. An X-ray examination revealed congenital cystic changes in the right lung, with consolidation in the middle lobe; the left lung appeared congested. Examination after the instillation of lipiodol revealed cystic changes in the right lung; the left lung was normal. An electrocardiographic examination revealed no abnormality.

Operation was considered, and an unsuccessful attempt was made beforehand to establish a pneumothorax. Later the idea of operation was abandoned, as the lung on the opposite side was found by physical examination to be involved in the infective process; the X-ray examination had not revealed this fact. The patient returned home after some weeks in hospital, and had at the time of the meeting reported for deep X-ray therapy.

Tabes Dorsalis.

Dr. Maxwell finally showed a male patient, aged forty-seven years, who had suffered from gonorrhœa thirty years earlier. He had first been admitted to hospital on September 22, 1929, when he was thought to be suffering from acute intestinal obstruction. His illness was of sudden onset, with abdominal pain and vomiting. Examination of the central nervous system revealed no abnormality; the pupils reacted to light and accommodation, the knee jerks and the ankle jerks were equal and active, and the plantar responses were flexor in type. Examination by means of a barium meal suggested the presence of a duodenal ulcer.

On November 15, 1929, the patient suffered from abdominal pain and vomiting. Examination of the central nervous system revealed that the pupils reacted normally, but that the knee jerks were sluggish and the ankle jerks absent. Lumbar puncture was performed and the cerebro-spinal fluid was found to contain an increased amount of globulin and 24 leucocytes per cubic millimetre; the fluid did not react to the Wassermann test, but the gold curve was "luetic" in type. On April 2, 1930, abdominal pain was present, with vomiting and what appeared to be slight hæmatemesis. The Wassermann test elicited a "doubtful positive" reaction. The knee and ankle jerks were absent, and sensation was diminished over the ulnar border of the forearm.

On July 21, 1935, painless swelling of the right ankle and shooting pains in the legs were present. The patient had abdominal pain and was vomiting. The knee and ankle jerks were absent and there was a loss of pain sensation on pressure over the *tendo Achillis*. The patient's gait was ataxic and his pupils reacted sluggishly to light. The sense of position and the sensations of passive movement and vibration were absent in the legs. The cerebro-spinal fluid yielded a "luetic" gold curve and a positive reaction to the Wassermann test; this test was repeated with the same result. The fluid contained an increased amount of globulin and 35 lymphocytes per cubic millimetre. An X-ray examination of the right ankle revealed a Charcot's joint.

On September 2, 1935, abdominal pain and vomiting were present. On May 10, 1936, the right ankle was swollen. Suppurative arthritis was present and an incision was made in the ankle. On October 31, 1936, the right leg was amputated below the knee. On July 25, 1938, abdominal pain and vomiting were present. No abnormality was detected in the *fundi oculorum*; the Wassermann test elicited no reaction.

The patient was treated for several years in the hospital and in the out-patient department with "Bismol". He was readmitted to hospital on April 16, 1940. Abdominal pain had been present for two weeks. The pain was sharp; it lasted for a week and then diminished slightly. The patient vomited frequently, but he had no hæmatemesis. He had had pain in the legs for two weeks; he said that these were the lightning pains he had had for years. For the last few days before his admission to hospital he had been unable to pass urine, and his bladder had had to be catheterized. His appetite was poor, he was losing weight, his bowels were constipated, and for two weeks he had had a cough with yellow sputum. He had had no headache. The patient's wife was alive and well, and he said that she had had no miscarriages; there were two children, both alive and well.

On his admission to hospital his temperature was 102·5° F., his pulse rate was 120 per minute, and the respirations numbered 22 per minute. The systolic blood pressure was 150 and the diastolic pressure 80 millimetres of mercury. No abnormality was detected in the heart; dulness to percussion and moist sounds were present at the base of both lungs. No abnormality was found in the abdomen. There was a perforating ulcer on the plantar surface of the left foot. The pupils were irregular in outline, but equal; they reacted sluggishly to light and reacted to accommodation. The knee and ankle jerks were absent; the left plantar response was not elicited. Patchy impairment of all forms of sensation was present in the lower limb; the sensation of pain was diminished over the *tendo Achillis* and sensation was impaired over the ulnar border of the forearm. The cranial nerves were normal; some slight neck stiffness was present. Kernig's sign was not elicited. There was no photophobia.

Carcinoma of the Fundus Uteri.

DR. R. W. CHAMBERS AND DR. L. W. GLEADELL showed a patient, aged sixty years, suffering from carcinoma of the *fundus uteri*, possibly supervening on fibroid growths. The patient had three children, the eldest aged thirty-six years, the youngest aged thirty years. The menopause had occurred when she was fifty-two years of age. Twelve months prior to her admission to hospital she had a short hæmorrhage *per vaginam*; since then she had had a brownish discharge, which had lately become blood-stained. For seven weeks before her admission to hospital she had had pain in the left hip and leg and had been unable to walk. She had lost one and a half stone in weight in four or five months.

On examination the patient was seen to be cachectic. There was a large, irregular, stony hard mass in the lower left quadrant of the abdomen. *Per vaginam* a mass was felt in the left and posterior fornix, apparently continuous with the body of the uterus. Mobility was very limited. The cervix was drawn to the left. There was a hard mass the size of a pigeon's egg in the posterior vaginal wall. An X-ray examination revealed a large metastasis in the left ilium, just above the acetabulum, and a probable metastasis in the right subclavicular area. Examination of the blood revealed the following facts: the erythrocytes numbered 5,940,000 per cubic millimetre and the hæmoglobin value was 95%; the leucocytes numbered 12,700 per cubic millimetre; no abnormality was detected in a film. Since the patient had been in hospital she had had several short hæmorrhages; very severe pain was present in both legs.

Prolapse of the Vault of the Vagina after Hysterectomy.

Dr. Chambers and Dr. Gleadell next showed a woman, aged fifty-five years, who had undergone vaginal hysterectomy for prolapse of the vault two months earlier. She now had prolapse of the vault, with an enterocele coming over the top of the approximated *levatores ani*. Dr. Chambers and Dr. Gleadell pointed out that the case illustrated the fact that vaginal hysterectomy without adequate anterior and posterior colpoperineorrhaphy was not a cure for prolapse, and that Fothergill's operation was universally considered the best operation.

Uretero-Vaginal Fistula.

Dr. Chambers and Dr. Gleadell finally showed a woman, aged thirty-eight years. Six years previously she had had a cyst removed from the left ovary; it was reported as being of low-grade malignancy. Three years later there was a recurrence of the mass in the left fornix; it was separate from the uterus. Laparotomy revealed a cystic mass, the size of a small orange, beneath the peritoneum and adherent to the left wall of the pelvis. Total hysterectomy was performed, with removal of the adnexæ and the cyst. The left ureter was severed in the process; it was sutured end to end with fine catgut. Since then the patient had had a vaginal discharge.

Vaginal examination revealed no evidence of recurrence. Urine was seen coming from the region of the left fornix. The thighs and vulva were excoriated. A cystoscopic examination was made. The capacity of the bladder was found to be six ounces; there was some scarring on the left side of the bladder. An efflux of clear urine came from the right side; there was no efflux from the left side. A ureteric catheter was passed on the right side to the pelvis; on the left side the catheter was blocked about one inch from the orifice. Excretion pyelography was carried out; the pyelograms revealed no abnormality. Dye was seen on the right side behind the bladder, probably in the vagina. The radiographic appearances suggested a fistula between the left ureter and the vagina.

(To be continued.)

University Intelligence.

THE UNIVERSITY OF SYDNEY.

THE following information is taken from the report of the Senate of the University of Sydney for September, 1940.

At a recent meeting of the Senate of the University of Sydney the following degrees were conferred:

Bachelor of Medicine (M.B.) and Bachelor of Surgery (B.S.): Clive Chisholm Sands, B.E.

Bachelor of Surgery (B.S.): John Henry Deakin, Charles Edward Marshall.

The Diploma in Radiology was awarded to Cecil Rhodes Sim, M.B., Ch.M.

Appointments.

The following appointments were made:

Mr. Herbert Parry, B.A., M.R.C.V.S., as Lecturer in Veterinary Medicine. Mr. Parry was educated at Queen's College, Cambridge, where he graduated Bachelor of Arts with honours in the natural sciences tripos. He is a member of the Royal College of Veterinary Surgeons of London. He was awarded a Commonwealth Research Fellowship to carry

out research work in the University of Wisconsin, United States of America. He is expected to arrive in Sydney during the current month.

Mr. J. L. Still, B.Sc., as Assistant Lecturer in Biochemistry from March 1, 1941. Mr. Still resigned from his position two years ago to enable him to undertake research work at the University of Cambridge. He is expected to qualify shortly for the degree of Doctor of Philosophy (Ph.D.).

Dr. Adrien Albert, who acted as Lecturer-in-Charge of the Pharmacy Department in 1938 and as Lecturer in the Department of Organic Chemistry in 1939 and 1940, has been appointed to a Commonwealth Research Fellowship from January 1, 1941. Dr. Albert will carry out research work in the chemistry of antiseptics in the Department of Organic and Applied Chemistry.

Dr. H. M. Rennie as Tutor in Medicine at Royal Prince Alfred Hospital for 1940.

Dr. Kevin Fagan as part-time Demonstrator in Anatomy for Michaelmas term.

Matriculation Requirements.

The Senate has, on the recommendation of the Faculty of Medicine and the Professorial Board, decided that chemistry at the higher standard shall be included in the subjects to be passed by candidates for matriculation in the Faculty of Medicine. The requirements for matriculation in the Faculty of Medicine will then comprise: (i) English at the higher standard, (ii) a language other than English at the higher standard, (iii) chemistry at the higher standard, (iv) mathematics, which may be lower or higher standard.

The Senate has also decided that the change shall come into force in respect of the Leaving Certificate Examination in November, 1943.

Physics and Chemistry in First-Year Medicine.

The Professorial Board and the Faculty of Medicine have given consideration to the question of whether any exemption in respect of the first-year courses might be allowed to students who had secured "A" passes or honours at the leaving certificate examination in physics, chemistry, zoology or botany. The Faculty of Medicine decided not to allow any exemption in zoology and botany, and passed the following resolution in respect of physics and chemistry:

> Whilst the present school syllabuses are in force, matriculants entering the Faculty of Medicine who have obtained honours or an "A" pass in physics or chemistry in the Leaving Certificate Examination may be allowed to take a special first-year course in those subjects, which may be a reduced course at the discretion of the heads of the departments concerned; all students will be required to sit for the same examination.

The Professorial Board submitted this resolution of the Faculty for the approval of the Senate, and recommended that the scheme outlined therein be brought into force next year. The Senate has approved the procedure.

Benefaction.

The Warden of the New England University College (Dr. E. H. Booth) has advised the Senate that he has received three amounts of £500 each from the three daughters of the late Sir James Murdoch, K.B.E., C.M.G., for the purpose of financing a scholarship tenable at the New England University College in memory of their father. The benefactors wish the scholarship to be awarded to a student of merit who would not be able to proceed to a degree without financial assistance. The Murdoch Scholarship is to be awarded for animal husbandry or rural science when such courses are available at the college, but in the meantime it is to be awarded to a student taking courses of an affiliated nature, such as veterinary science, agriculture or science subjects relating to rural pursuits.

The thanks of the Senate have been forwarded to the donors.

Correspondence.

THE HISTOLOGY OF NASAL POLYPI.

SIR: I was very interested to read the articles on the histology of nasal polypi by Dr. Gillies in the current journal. The ætiology of nasal polypi in the vast majority of the cases is allergic, which may be proved by: (*a*) A careful history dating from patient's birth and including family history. (*b*) Skin tests. (*c*) Constitutional test, that is, reproducing conditions of allergy, such as inhaling the offending allergen. (*d*) Nasal smears for eosinophilia, being careful to do the tests when secondary infection is minimal and does not obscure the ætiological picture, and, if possible, when the patient has been exposed to the exciting allergen. Several smears taken over a period of time may be necessary to demonstrate this eosinophilia, which is usually present. (*e*) Histological examination.

The basic changes of allergy are œdema and eosinophilia infiltration, and the response is measured by the sensitivity of the tissues, the sensitizing and shocking doses of the allergen based on the time interval of action and the nature of the mucous membrane involved. In the nose the mucous membrane of the inspiratory zone (the first portion to receive the inspiratory blast of air), which is found in the region of the middle meatus and ethmoid cells, is of the loose myxomatous type, which readily and quickly may form polypi, as opposed to the denser mucous membrane over the septum and turbinates. This comparison is similar to that between œdema of the prepuce and scrotum against that of the ankle. Allowing for the initial difference in picture between the mucous membrane of the turbinates and ethmoidal cells, the allergic reaction is exemplified equally in the pale boggy mucous membrane of the inferior turbinate and the nasal polypi when seen under the microscope.

The polypi would appear to be due to the vasomotor œdema being retained in the tissues instead of escaping. Chronic infection would appear to decrease the permeability of the mucous membrane, thereby locking up the fluid poured out from the blood vessels. The chemical composition of a polypus (nasal hydroma would be a better descriptive term) is identical with that of blood serum in the fluid and mineral content.

Yours, etc.,

135, Macquarie Street, Sydney,
August 26, 1940.

BASIL WILLIAMS.

THE REORGANIZATION OF THE MEDICAL PROFESSION.

SIR: I feel Dr. Brown's article in this week's journal and your leading article on the same should not be allowed to pass without a word of appreciation for the fine spirit shown by the leading article and the thoughtful and far-sighted exposition of the position as envisaged by Dr. Brown.

There is a wonderful law of compensation, and my own view is that what we may lose in the swings we pick up in the roundabouts, to use a colloquial phrase.

It would, however, be worth while the British Medical Association appointing a permanent subcommittee to look into the position of medical practice in its altering phases and issue at least quarterly bulletins for publication in medical and lay Press, clearly showing where the profession stands as each new development makes its appearance.

One matter to which it might turn its attention is the classification of the whole of the private practices in Australia, placing them in their proper grades for the guidance of the profession. This could be available to *bona fide* purchasers of practices, and would help to stabilize the value of practices on a fair basis. It would also exercise some check on the placing of graduates into positions for which they are suitable. The British Medical Association would then know before a move is made whether it is likely to be a success, that is, of course, provided the British Medical Association was always informed of intended moves.

A point which should be brought out is that in the past a buyer could take over any practice whether properly qualified or not, provided he could afford the money.

My view is that a subcommitee, such as I have suggested, should have the power to prevent unsuitable transfers and also to assist financially transfers which might otherwise not be possible.

It cannot be denied that the financial side has played too important a part in the placing of practitioners. Qualifications and ability have often been sacrificed by lack of capital.

The same applies in the larger sphere of hospital control and management.

This is a big subject, and a difficult one; but previous difficulties have been overcome, and no doubt evolution will work out a workable plan.

The profession, however, should not stand idly by, but should assist evolution by every means in its power.

Thanking you for space.

Yours, etc.,

Bruce Rock, Western Australia,
September 3, 1940.

H. T. ILLINGWORTH.

Australian Medical Board Proceedings.

QUEENSLAND.

THE following is an extract from the *Queensland Government Gazette* of August 24, 1940, at page 624.

The Medical Board of Queensland,
Brisbane, 12th August, 1940.

PUBLICATION authorised under section 42 of *"The Medical Act of* 1939" by the Medical Board of Queensland.

R. W. CILENTO, President.

THE MEDICAL ASSESSMENT TRIBUNAL.

BETWEEN:

THE MEDICAL BOARD OF QUEENSLAND (Prosecutor)

AND

DR. MAX MICHEL (Respondent).

The charges by the Medical Board of Queensland against the abovenamed Dr. Max Michel specified in the Notice dated the 4th June, 1940, given by the Registrar of the said the Medical Board of Queensland to the said Dr. Max Michel having been heard by me as the Medical Assessment Tribunal constituted under *"The Medical Act of* 1939" (assisted by Sir Raphael West Cilento, Kt.B., M.D., B.S., and Alexander Hammett Marks, M.B., B.S., M.D., as assessors) on the 22nd, 23rd, 24th and 29th days of July, 1940, AND UPON HEARING Mr. A. D. McGill, K.C., and Mr. O'Sullivan of Counsel for the said the Medical Board of Queensland and Mr. E. T. Real of Counsel for the said Dr. Max Michel AND UPON HEARING the oral evidence of the witnesses called on behalf of the said the Medical Board of Queensland and the oral evidence of the said Dr. Max Michel AND UPON READING the several documentary exhibits admitted in evidence upon the hearing of the said charges I find the following facts.

(1) On the 24th September, 1939, one ..... became a patient of Kenneth Stanton Crouch a duly qualified medical practitioner registered in Queensland.

(2) On the 28th September, 1939, one Alexander William Brennan Stark a duly qualified medical practitioner registered in Queensland performed the operation of curetting upon the said ..... the said Kenneth Stanton Crouch acting as anæsthetist at the said operation.

(3) On the 19th October, 1939, the said Alexander William Brennan Stark dilated the uterus of the said ..... under anæsthetic (the said Kenneth Stanton Crouch acting as anæsthetist) and satisfied himself that the curette performed on the 28th September, 1939, had been complete.

(4) The said ..... exhibited no indication or symptom that she was suffering from cancer of the cervix on the occasion of either of the said operations performed on her by the said Alexander William Brennan Stark.

(5) On the 7th December, 1939, the said ..... became a patient of the abovenamed Dr. Max Michel a duly qualified medical practitioner registered in Queensland.

(6) On the said 7th December, 1939, the said Max Michel made a vaginal examination of the said ..... manually and by means of a vulcanite speculum and thereby satisfied himself that the said ..... exhibited no symptom or indication that she was suffering from cancer of the cervix.

(7) After making the said examination on the 7th December, 1939, the said Max Michel informed the said .....:
- (*a*) that she was suffering from cancer of the cervix;
- (*b*) that the said cancer was then inoperable;
- (*c*) that instead of her being curetted her uterus should have been removed;
- (*d*) that he would have to treat her for the said cancer by Ray treatment which would prevent her having any more children;
- (*e*) that if the said Ray treatment were not successful she would either die or go up the line (meaning thereby that she would become an inmate of a mental hospital) within six weeks;
- (*f*) that his fee for a full X Ray of the said ..... would be £8 8s.;
- (*g*) that his fee for giving her the said Ray treatment would be £2 10s. per week.

(8) On the 9th December, 1939, the said Max Michel informed ..... the husband of the said ..... in her presence:
- (*a*) that the said ..... was suffering from cancer of the cervix;
- (*b*) that she was very bad and that she would either die or go up the line within six weeks unless he (the said Max Michel) cured her quickly;
- (*c*) that "they", meaning thereby the said Dr. Kenneth Stanton Crouch and the Doctor associated with him in the performance of the operation of curetting upon the said ....., did not know their work and should have known that the said ..... was suffering from cancer;
- (*d*) that when he, the said Max Michel, took the full X Ray photographs of the said ..... he would give them to the said ..... to take to the said Dr. Crouch to show them to the said Dr. Crouch that it might be the means of saving other people whom he was treating;
- (*e*) that before treating the said ..... by means of the Ray he, the said Max Michel, would have to get permission from Sir Raphael Cilento otherwise he would find himself in trouble but that in this case it was absolutely necessary and he would get permission from Sir Raphael Cilento to treat the said ..... with the Ray;
- (*f*) that he could operate on the said ..... but that she was then past that stage and the only thing that would do her any good was the Ray treatment.

(9) The said Max Michel made the several statements set out in Findings 7 (*a*), (*b*), (*d*) and (*e*) and 8 (*a*), (*b*), (*e*) and (*f*) without belief in the truth of any of the said statements and believing each of the said statements to be false.

(10) The said Max Michel informed the said ..... and her said husband that she was suffering from cancer of the cervix as set out in Findings 7 and 8 in order to induce her to undergo Ray treatment by him in pretended cure of the said alleged cancer and did thereby induce her to undergo certain Ray treatment in pretended cure of her said alleged cancer and to make certain payments of money to him and was thereby guilty of infamous conduct in a professional respect.

(11) At the time when the said Max Michel made the several statements set out in Findings 7 (*c*) and 8 (*c*) and (*d*) he had no reason to believe and did not believe:
- (*a*) that the said ..... had been suffering from cancer when the said operations of curetting were performed upon her;
- (*b*) that the uterus of the said ..... should have been removed instead of her being curetted;
- (*c*) that either the said Dr. Crouch or the Doctor associated with him in the performance of the said curettes did not know his work.

(12) In making the statements set out in Findings 7 (*c*) and 8 (*c*) and (*d*) the said Max Michel unjustifiably and without cause disparaged the professional skill and competence of a fellow medical practitioner, to wit, the said Kenneth Stanton Crouch, and by such disparagement was guilty of infamous conduct in a professional respect.

I THEREFORE FIND that the said Max Michel has been guilty of misconduct in a professional respect AND I ORDER that the name of the said Max Michel be erased from the Register of Medical Practitioners, Queensland.

Dated the Sixth day of August, 1940.

NEAL MACROSSAN, S.P.J.
The Judge Constituting the Medical Assessment Tribunal.

Naval, Military and Air Force.

DECORATION.

IT has been announced that Captain (Temporary Major) William Robert Macfarlane Drew has been created an officer of the Military Division of the Most Excellent Order of the British Empire.

AN APPEAL FOR SERVICE.

VACANCIES exist for medical men willing to go on reserve of officers and prepared to do one month's camp with the First Division. Applications for commission may be addressed to Colonel W. Vickers, A.D.M.S., First Division, "Heatherbrae", Raymond Terrace, New South Wales.

Obituary.

MAUDE ELIZABETH SEYMOUR ABBOTT.

WE regret to announce the death of Dr. Maude Elizabeth Seymour Abbott, which has been reported recently from New York. Dr. Abbott is known particularly for her work in connexion with the organization of medical museums.

The Royal Australasian College of Surgeons.

THE next meeting of the Australian Board of Censors of the Royal Australasian College of Surgeons will be held at the College, Spring Street, Melbourne, probably in March, 1941.

Candidates who desire to present themselves at this meeting should apply to the Censor-in-Chief for permission to do so, on or before December 31, 1940.

The appropriate forms are available at the college, Spring Street, Melbourne, and at the offices of the various State secretaries.

Nominations and Elections.

THE undermentioned has applied for election as a member of the New South Wales Branch of the British Medical Association:

Cranna, Max Maziere, M.B., B.S., 1939 (Univ. Sydney), 363, Rocky Point Road, Ramsgate.

The undermentioned have been elected as members of the New South Wales Branch of the British Medical Association:

Brett, Alan Sidney, M.B., B.S., 1940 (Univ. Sydney), St. George District Hospital, Kogarah.

Henderson, Annis Macalister, M.B., B.S., 1940 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

NOTICE.

THE next clinico-pathological conference arranged by the Post-Graduate Directors of Medicine, Surgery and Pathology will be held at the Prince Henry Hospital, Little Bay, on Monday, September 23, 1940, at 4.30 p.m. The subject will be: cases for diagnosis and discussion—(*a*) cerebral, (*b*) cardiac. A cordial invitation to be present is extended to all medical practitioners.

Medical Appointments.

Dr. C. Y. Bland has been appointed a Senior Medical Officer in the Office of the Director-General of Public Health of New South Wales.

* * *

Dr. D. F. Buckle has been appointed a Medical Officer in the Department of Mental Hospitals of New South Wales.

* * *

Dr. T. Wunderlich has been appointed Government Medical Officer at Balranald, New South Wales.

* * *

Dr. W. C. B. Harvey has been appointed a Member of the New South Wales Medical Board, in pursuance of the provisions of *The Medical Practitioners Act*, 1938-1939, of New South Wales.

* * *

Dr. T. L. McLarty has been appointed Temporary Honorary Assistant Ophthalmologist at the Royal Adelaide Hospital, Adelaide.

* * *

Dr. R. T. Kennedy has been appointed Government Medical Officer at Gundagai, New South Wales.

Books Received.

"Dermatologic Therapy in General Practice", by M. B. Sulzberger, M.D., and J. Wolf, M.D.; 1940. Chicago: The Year Book Publishers. Demy 8vo, pp. 680, with illustrations.

Medical Research Council of the Privy Council. Special Report Series, No. 242: "Studies in Nutrition—An Inquiry into the Diet of Families in the Highlands and Islands of Scotland", by E. P. Cathcart, A. M. T. Murray and J. B. Beveridge; 1940. London: His Majesty's Stationery Office. Medium 8vo, pp. 37, with illustrations. Price: 9d. net.

"Endocrine Therapy in General Practice", by E. L. Sevringhaus, M.D., F.A.C.P.; Third Edition; 1940. Chicago: The Year Book Publishers. Demy 8vo, pp. 239, with illustrations.

Diary for the Month.

SEPT. 24.—New South Wales Branch, B.M.A.: Medical Politics Committee.
SEPT. 25.—Victorian Branch, B.M.A.: Council.
SEPT. 26.—South Australian Branch, B.M.A.: Branch.
SEPT. 26.—New South Wales Branch, B.M.A.: Branch.
SEPT. 27.—Tasmanian Branch, B.M.A.: Council.
SEPT. 27.—Queensland Branch, B.M.A.: Council.
OCT. 1.—New South Wales Branch, B.M.A.: Council (Quarterly).
OCT. 2.—Western Australian Branch, B.M.A.: Council.
OCT. 2.—Victorian Branch, B.M.A.: Branch.
OCT. 3.—South Australian Branch, B.M.A.: Council.
OCT. 4.—New South Wales Branch, B.M.A.: Annual Meeting of Delegates.
OCT. 4.—Queensland Branch, B.M.A.: Branch.
OCT. 8.—New South Wales Branch, B.M.A.: Executive and Finance Committee Organization and Science Committee.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phœnix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associate Friendly Societies' Medical Institute; Proserpine District Hospital. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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